

R E P O R T R E S U M E S

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A GUIDE FOR EQUIPPING INDUSTRIAL ARTS FACILITIES.
AMERICAN INDUSTRIAL ARTS ASSN., WASHINGTON, D.C.

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DESCRIPTORS- *INDUSTRIAL ARTS, *HAND TOOLS, *EQUIPMENT,
GUIDES,

SCHOOL ARCHITECTS, ADMINISTRATORS, PLANNERS, AND INDUSTRIAL ARTS SUPERVISORS AND TEACHERS MAY USE THIS GUIDE IN PLANNING, REVISING, AND EVALUATING FACILITIES. IN THE FIRST PART, HAND TOOLS, MACHINES, AND GENERAL EQUIPMENT ARE LISTED FOR (1) AUTO AND POWER MECHANICS, (2) CERAMICS, (3) DRAFTING, (4) ELECTRICITY-ELECTRONICS, (5) ELEMENTARY, (6) GENERAL SHOP, (7) GRAPHIC ARTS, (8) METALWORKING, (9) PLASTICS, AND (10) WOODWORKING. INFORMATION FOR EACH ITEM OF EQUIPMENT INCLUDES (1) INSTRUCTIONAL LEVEL, (2) A CODE NUMBER CROSS REFERENCE TO THE EQUIPMENT SPECIFICATIONS, (3) ITEM NAME, AND (4) QUANTITY NEEDED FOR 24 STUDENTS. THE SECOND PART, EQUIPMENT SPECIFICATIONS, INCLUDES ITEMS OF EQUIPMENT ARRANGED ALPHABETICALLY AND NUMBERED CHRONOLOGICALLY, THE AREA IN WHICH THE ITEM IS USED, AND, IN MOST CASES, BASIC SIZES, DIMENSIONS, CAPACITIES, AND SAFETY CONSIDERATIONS WHERE THEY APPLY. PRICE LISTS OF AMERICAN STANDARDS FOR SAFETY AND AMERICAN STANDARDS ON CONSUMER GOODS ARE INCLUDED. THIS DOCUMENT IS AVAILABLE FOR \$4.75 FROM AMERICAN INDUSTRIAL ARTS ASSOCIATION, NATIONAL EDUCATION ASSOCIATION, 1201 SIXTEENTH STREET, N.W., WASHINGTON, D.C. 20036. (EM)

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A Guide for Equipping Industrial Arts Facilities

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American Industrial Arts Association**

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A Guide for Equipping Industrial Arts Facilities

**First Edition
prepared by
The Equipment Guide Committee
American Industrial Arts Association**

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The members of the Equipment Standards Committee are grateful for the generous support that has made the Guide for Equipping Industrial Arts Facilities possible. They are especially indebted to the members of the Research Advisory Committee of Western Washington State College who contributed financial assistance and staff time to the project, to Denis Kigin and the Safety Committee of the American Industrial Arts Association who checked the data and made suggestions concerning the safety aspects of the information provided in this Guide, and to the following persons who served with diligence in the various stages of compilation: Dennis Frimml and Misses Mary Hamelin, Vivian Nieuwsma, and Donna Hamstra.

Sam R. Porter, Chairman
Equipment Standards Committee
American Industrial Arts Association

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FOREWORD

The American Industrial Arts Association holds that well-equipped facilities are essential in providing a substantial and modern program of industrial arts education. To assist in meeting this tenet, the AIAA Executive Board in 1964 made plans for the development of an equipment guide. President Walter C. Brown appointed Sam R. Porter to chair a committee that would gather information and prepare material concerning the equipping of industrial arts facilities and furnished directions for the selection of committee members.

Teachers, supervisors, and teacher educators having specialized knowledge and experience in selected areas of industrial arts and representing different regions of the United States and Canada were named by Committee Chairman Porter and approved by the AIAA Executive Board to serve on the Equipment Guide Committee.

Information presented in Industrial Arts Education: Purposes, Program, Facilities, and Instruction published by the American Council of Industrial Arts Supervisors and Planning Industrial Arts Facilities published by the American Council on Industrial Arts Teacher Education was used in selecting the areas of instruction and types of facilities to be covered in the equipment guide.

The Equipment Guide Committee met during the AIAA national conventions in Washington, D.C., in 1964 and in Tulsa in 1965 to make progress reports on the preparation of the material assigned to each Committee member. A final review of the material was made during the 1966 AIAA national convention in San Francisco. Upon completion of the manuscript, it was submitted to the AIAA Publications Committee for review.

Appreciation is expressed to the members of the Equipment Guide Committee for preparing the material for Guide for Equipping Industrial Arts Facilities; to members of the AIAA Publications Committee for reviewing the manuscript; and to AIAA presidents, Walter C. Brown, Robert S. Swanson, and Earl M. Weber, and members of the executive boards during this three-year period for assisting in the successful culmination of this project.

All persons who have responsibility for selecting and purchasing equipment should find Guide for Equipping Industrial Arts Facilities of great value.

Robert L. Woodward
President, American Industrial Arts Association
1966-67

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INTRODUCTION

Purpose of the Guide:

The purposes of the Guide for Equipping Industrial Arts Facilities are listed as follows:

To provide a guide for school architects, administrators, planners, and industrial arts supervisors and teachers as they plan new and revise existing facilities.

To establish criteria for the evaluation of the conditions of a local facility.

To encourage teachers to improve their local programs.

To assist teachers and supervisors in writing specifications.

To lend the support of a national organization to local requests for equipment.

To provide stability to program requirements during personnel changes.

To serve as a unifying force in industrial arts throughout the United States and Canada.

Criteria for Selection of Equipment:

Using his past industrial and educational experience as the primary criteria for the selection of tools and equipment for inclusion, each committee member attempted to further recognize the following specific criteria:

Tools and equipment to be purchased should be those items which are basic to developing an understanding of industry and its processes and should be restricted to those mandated by the objectives of the course.

A trend toward more experimental and scientific equipment as a result of changes in curriculuar emphasis in this direction should be recognized.

In the school setting there is a necessity for high-quality single purpose tools and machines that require a minimum of maintenance.

In industrial arts education there should be an increasing use of light-weight, portable tools.

Tools and equipment should come from business concerns that have amply demonstrated the worth of their product and the availability of their services and parts.

Terminology and Objectives in Industrial Arts:

The terminology and objectives stated by the American Council of Industrial Arts Supervisors in their publication Industrial Arts Education: Purposes, Programs, Facilities, Instruction (American Industrial Arts Association, 1963) have been recognized by the Equipment Guide Committee as an acceptable guideline for this Guide.

The American Standards Association:

The American Standards Association (ASA) publishes standards for many of the tools, equipment, and processes used in industrial arts education. These standards are published in booklets, each devoted to a single item of equipment or process. A catalog listing the various publications and prices is available

from the American Standard Association, 10 East 40th Street, New York City, 10016. The Equipment Guide Committee strongly urges that ASA standards are consulted before purchasing or installing equipment. A listing of the American Standards for Safety is included in this Guide as an example.

A Word of Caution:

The Committee is cognizant of the possibility that this Guide may be misused. At a time when national attention is focused upon major curriculum studies and imminent reorganizations of program and methods, it would be unfortunate if this Guide were considered as the dictum of course organization, content, and procedure. All of the lists are presented as suggestions only; none is perfect. The organization of the material into ten major sections is for convenience only and should not be interpreted to constitute endorsement of any particular type of course organization or offering. Indeed, the Committee encourages curricular innovation and reorganization, but deems it unlikely that the fruits of such innovation will demand tools and equipment too different from those which are listed in the Guide.

Revision:

Because of the changing nature of industrial processes and products, and the changes reflected in industrial arts content and practice, the Committee recognizes a need for constant revision of this Guide. The reader is encouraged to assist in improving future editions of this Guide by submitting suggestions and comments. To facilitate this procedure, addressed postage-paid post cards are included at the end of the Guide; readers are encouraged to use them.

The Format of the Guide:

This volume is divided into two major divisions:

1. Equipment Items by Sections. A listing of the tools and equipment recommended for each of the major areas represented.
2. Equipment Specifications. A master list of the tools and equipment, with general descriptive specifications.

I. EQUIPMENT ITEMS BY SECTIONS

Index:	Page
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Electricity-Electronics	26
Elementary	30
General Shop	34
Graphic Arts	41
Metalworking	46
Plastics	55
Woodworking	61

How to Use the Equipment Lists:

It should be emphasized that the lists presented in each Section are provided as recommendations and should be considered open and flexible. They are suggested only as a guide. However, these lists are a summary of the recommendations made by those selected for their experience and expertise in the area they represent.

Any selection of equipment and tools for inclusion in this Guide necessarily involves choices among alternatives. It is not intended that any one school should buy all of the items recommended, nor is this necessary. However, the purchase of all items in each list would assure the kind and amount of equipment sufficient to carry on basic processes within each area. Tools and equipment were omitted when their purchase seemed unreasonable or unwarranted within the industrial arts setting.

Each list contains the following information:

Section

Level—Note that the traditional school grade level is avoided in this listing; introductory experiences are considered as basic regardless of the grade level at which they are offered.

Subsection—Tools and equipment have been grouped according to their common use or association, and have been listed within subsection lists.

Code—A cross-reference to the second division of the Guide.

Item—The common name of the tool, machine, or furnishing.

Number—The quantity recommended is for a class of approximately 24 students. Two Sections (Elementary and General Shop) have unique requirements; instructions for these Sections appear with their respective lists.

AUTO AND POWER MECHANICS

Introductory			Advanced		
I. Hand Tools			I. Hand Tools		
Code	Item	Number	Code	Item	Number
			0075	Automatic Transmission Tool (set)	1
0120	Bar, Pry	1	0120	Bar, Pry	1
0135	Battery, Storage (6V)	1	0135	Battery, Storage (6V)	1
0140	Battery, Storage (12V)	1	0140	Battery, Storage (12V)	1
0395	Body-Fender Tools (set)	1	0395	Body-Fender Tools (set)	1
0445	Brake Adjusting Tool (spoons) (set)	1	0445	Brake Adjusting Tool (spoons) (set)	1
0500	Brush, Wire	8	0500	Brush, Wire	2
0645	Caliper, Inside (6")	1	0640	Caliper, Hermaphrodite	1
0655	Caliper, Outside (6")	1	0645	Caliper, Inside (6")	1
			0655	Caliper, Outside (6")	1
0780	Chisel, Cold (set)	4	0665	Caliper, Vernier	1
0875	Clamp, "C" (4")	2	0780	Chisel, Cold (set)	4
0880	Clamp, "C" (6")	2	0875	Clamp, "C" (4")	2
0885	Clamp, "C" (8")	2	0880	Clamp, "C" (6")	2
0890	Clamp, "C" (10")	2	0885	Clamp, "C" (8")	2
0950	Cleaner, Ring groove	1	0890	Clamp, "C" (10")	2
1030	Compressor, Piston ring	2	0950	Cleaner, Ring groove	1
1035	Compressor, Valve spring	2	1030	Compressor, Piston ring	2
1085	Creeper	4	1035	Compressor, Valve spring	2
1140	Cutter, Bolt	1	1085	Creeper	4
			1140	Cutter, Bolt	1
1220	Cutter, Tubing	1	1145	Cutter, Brushing	1
1250	Die, Letter (set)	1	1195	Cutter, Muffler	1
1255	Die, Number (set)	1	1205	Cutter, Pipe	1
1295	Divider, Spring (6")	1	1220	Cutter, Tubing	1
			1250	Die, Letter (set)	1
1320	Dresser, Abrasive wheel	1	1255	Die, Number (set)	1
1350	Drill, Hand (1/4")	1	1295	Divider, Spring (6")	1
1355	Drill, Hand (3/8")	1	1310	Dolly, Body (set)	1
1360	Drill Stand, Fractional	1	1320	Dresser, Abrasive wheel	1
1370	Drill, Twist (number set)	1	1350	Drill, Hand (1/4")	1
1375	Drill, Twist, Straight shank (fractional set)	2	1355	Drill, Hand (3/8")	1
1495	Extension Cord	6	1360	Drill Stand, Fractional	1
1500	Extractor, Screw (set)	1	1370	Drill, Twist (number set)	1
1540	Files (see specifications for set detail)		1375	Drill, Twist, Straight shank (fractional set)	2
1550	File Card and Brush	6	1495	Extension Cord	6
			1500	Extractor, Screw (set)	1
			1540	Files (see specifications for set detail)	
			1550	File Card and Brush	6

1560	File, Contact point (ignition)	1	1560	File, Contact point (ignition)	1
1625	Flywheel holder	1	1605	Flaring Tool (set)	1
1715	Gauge, Belt tension	1	1625	Flywheel holder	1
1725	Gauge, Center	1	1715	Gauge, Belt tension	1
1730	Gauge, Cylinder pressure	1	1720	Gauge, Carburetor (set)	1
1745	Gauge, Drill, Fractions	1	1725	Gauge, Center	1
1750	Gauge, Drill, Number	1	1730	Gauge, Cylinder pressure	1
1760	Gauge, Ignition (set)	2	1745	Gauge, Drill, Fractions	1
1810	Gauge, Spark plug	3	1750	Gauge, Drill, Number	1
1815	Gauge, Spring tension	1	1760	Gauge, Ignition (set)	2
1830	Gauge, Thickness ("feeler")	8	1800	Gauge, Screw pitch	2
1835	Gauge, Tire pressure	2	1810	Gauge, Spark plug	3
1845	Gauge, Vacuum and low pressure	1	1815	Gauge, Spring tension	1
1855	Gauge, Wire and sheet metal (American)	1	1820	Gauge, Surface	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1	1830	Gauge, Thickness ("feeler")	8
1885	Gloves, Leather (pair)	2	1835	Gauge, Tire pressure	2
1900	Goggles (spectacles), Clear observation	6	1845	Gauge, Vacuum and low pressure	1
1905	Goggles, Gas welding	4	1855	Gauge, Wire and sheet metal (American)	1
1950	Grease Gun, Suction, General purpose	1	1860	Gauge, Wire and sheet metal (U.S.S.)	1
2020	Hammer, Ball peen (4 oz.)	4	1885	Gloves, Leather (pair)	2
2025	Hammer, Ball peen (8 oz.)	4	1900	Goggles (spectacles), Clear observation	6
2035	Hammer, Ball peen (16 oz.)	4	1905	Goggles, Gas welding	4
2055	Hammer, Brass head	2	1950	Grease Gun, Suction, General purpose	1
2085	Hammer, Claw (16 oz.)	1	2020	Hammer, Ball peen (4 oz.)	4
2090	Hammer, Engineer's (40 oz.)	2	2025	Hammer, Ball peen (8 oz.)	4
2105	Hammer, Lead	2	2035	Hammer, Ball peen (16 oz.)	4
2135	Hammer, Soft face (8 oz.)	2	2055	Hammer, Brass head	2
2140	Helmet, Welding (hand type)	3	2060	Hammer, Chasing	1
2145	Helmet, Welding (arc) (head type)	2	2065	Hammer, Chipping	2
2200	Hydrometer	1	2085	Hammer, Claw (16 oz.)	1
			2090	Hammer, Engineer's (40 oz.)	2
			2105	Hammer, Lead	2
			2125	Hammer, Sledge	1
			2135	Hammer, Soft face (8 oz.)	2
			2140	Helmet, Welding (hand type)	3
			2145	Helmet, Welding (arc) (head type)	2
			2200	Hydrometer	1

2540	Mallet, Rawhide	2	2210	Indicator, Dial test	1
2545	Mallet, Rubber	2	2540	Mallet, Rawhide	2
2620	Micrometer, Inside	1	2545	Mallet, Rubber	2
2625	Micrometer, Outside (1")	1	2620	Micrometer, Inside	1
2630	Micrometer, Outside (2")	1	2625	Micrometer, Outside (1")	1
2635	Micrometer, Outside (3")	1	2630	Micrometer, Outside (2")	1
			2635	Micrometer, Outside (3")	1
			2640	Micrometer, Outside (4")	1
			2645	Micrometer, Outside (5")	1
2835	Nipper, End cutting	1	2835	Nipper, End cutting	1
2845	Nozzle, Blow gun (air line)	1	2845	Nozzle, Blow gun (air line)	1
2865	Oiler, Bench	6	2865	Oiler, Bench	6
2870	Oiler, Pump	6	2870	Oiler, Pump	6
2875	Oiler, Straight	6	2875	Oiler, Straight	6
2890	Oilstone, Combination, India	2	2890	Oilstone, Combination, India	2
2895	Oilstone, Combination, Silicon carbide	2	2895	Oilstone, Combination, Silicon carbide	2
2925	Packer, Wheel bearing	1	2925	Packer, Wheel bearing	1
3065	Pliers, Battery	2	3065	Pliers, Battery	2
3075	Pliers, Brake	2	3075	Pliers, Brake	2
3080	Pliers, Chain	1	3080	Pliers, Chain	1
3085	Pliers, Combination (6")	8	3085	Pliers, Combination (6")	8
3090	Pliers, Combination (8")	6	3090	Pliers, Combination (8")	6
3100	Pliers, Diagonal cutting	2	3100	Pliers, Diagonal cutting	2
			3115	Pliers, Hose clamp, Radiator and gas line	1
3120	Pliers, Ignition	2	3120	Pliers, Ignition	2
3135	Pliers, Needle nose	4	3135	Pliers, Needle nose	4
3140	Pliers, Retaining ring	2	3140	Pliers, Retaining ring	2
3150	Pliers, Side-cutting	8	3150	Pliers, Side-cutting	8
3170	Pliers, Vise-grip wrench	2	3170	Pliers, Vise-grip wrench	2
3175	Pliers, Waterpump	2	3175	Pliers, Waterpump	2
3235	Press, Arbor	1	3235	Press, Arbor	1
3390	Puller Assembly	1	3390	Puller Assembly	1
			3395	Puller Assembly (large)	1
			3405	Puller, Axle	1
			3410	Puller, Freeze plug	1
			3415	Puller, Gear (set)	1
			3420	Puller, Seal (set)	1
			3425	Puller, Steering wheel	1
			3430	Puller, Valve guide and valve	1
			3435	Puller, Wheel (set)	1
3445	Pump, Oil drum	2	3445	Pump, Oil drum	2
3455	Punch, Center (set)	4	3455	Punch, Center (set)	4
3470	Punch, Drift (set)	4	3470	Punch, Drift (set)	4
3500	Punch, Pin (set)	1	3500	Punch, Pin (set)	1
			3585	Reamer, Cylinder ridge	1
3610	Reels, Drop cord	4	3610	Reels, Drop cord	4
			3625	Remover, Stud (set)	1

3705	Rule, Flexible steel tape (10')	1	3645	Rethreader, Axle	1
3750	Rule, Steel (12")	4	3650	Rethreader, Spark plug hole	1
3850	Saw, Hack (hand)	4	3705	Rule, Flexible steel tape (10')	1
3965	Scissors	2	3750	Rule, Steel (12")	4
3985	Scraper, Carbon	8	3850	Saw, Hack (hand)	4
4025	Screwdriver, Clutchhead	1	3965	Scissors	2
4050	Screwdriver, Phillips (set)	2	3985	Scraper, Carbon	8
			4025	Screwdriver, Clutchhead	1
			4050	Screwdriver, Phillips (set)	2
			5060	Screwdriver, Spiral ratchet	1
4075	Screwdriver, Standard bit (square blade) (4")	2	4075	Screwdriver, Standard bit (square blade) (4")	2
4080	Screwdriver, Standard bit (square blade) (6")	2	4080	Screwdriver, Standard bit (square blade) (6")	2
4085	Screwdriver, Standard bit (square blade) (8")	2	4085	Screwdriver, Standard bit (square blade) (8")	2
4090	Screwdriver, Standard bit (square blade) (10")	2	4090	Screwdriver, Standard bit (square blade) (10")	2
4095	Screwdriver, Standard bit (square blade) (12")	2	4095	Screwdriver, Standard bit (square blade) (12")	2
4100	Screwdriver, Standard bit ("stubby")	4	4100	Screwdriver, Standard bit ("stubby")	4
4105	Scriber	2	4105	Scriber	2
4165	Shield, Face	4	4165	Shield, Face	4
4275	Snips, Tinner's, Straight (#8)	1	4275	Snips, Tinner's, Straight (#8)	1
4335	Soldering Gun, Electric	1	4335	Soldering Gun, Electric	1
4435	Spout, Pouring, Oil can	1	4435	Spout, Pouring, Oil can	1
4640	Strap, Battery	2	4640	Strap, Battery	2
4760	Tap and Die, NC (U.S.S.) (set)	1	4760	Tap and Die, NC (U.S.S.) (set)	1
4765	Tap and Die, NF (S.A.E.) (set)	1	4765	Tap and Die, NF (S.A.E.) (set)	1
4770	Tap and Die, Pipe (set)	1	4770	Tap and Die, Pipe (set)	1
4815	Tester, Battery cell	1	4815	Tester, Battery cell	1
4845	Tester, Radiator pressure	1	4845	Tester, Radiator pressure	1
			4930	Tool, Drag link and shock arm	1
			4935	Tool Holder, Lathe (left hand)	1
			4940	Tool Holder, Lathe (right hand)	1
			4945	Tool Holder, Lathe (straight)	1
			4955	Torch, Propane (kit)	1
5255	Wrench, Adjustable end (6")	2	5255	Wrench, Adjustable end (6")	2

5260	Wrench, Adjustable end (8")	2	5260	Wrench, Adjustable end (8")	2
5265	Wrench, Adjustable end (10")	2	5265	Wrench, Adjustable end (10")	2
5270	Wrench, Adjustable end (12")	2	5270	Wrench, Adjustable end (12")	2
5275	Wrench, Adjustable end (monkey)	2	5275	Wrench, Adjustable end (monkey)	2
5280	Wrench, Allen key (hex) (set)	2	5280	Wrench, Allen key (hex) (set)	2
5290	Wrench, Combination box and open end (set)	4	5290	Wrench, Combination box and open end (set)	4
5295	Wrench, Combination box and open end (metric) (set)	1	5295	Wrench, Combination box and open end (metric) (set)	1
5300	Wrench, Deep socket (3/8" drive) (set)	1	5300	Wrench, Deep socket (3/8" drive) (set)	1
5305	Wrench, Deep socket (1/2" drive) (set)	1	5305	Wrench, Deep socket (1/2" drive) (set)	1
5310	Wrench, Drain plug	2	5310	Wrench, Drain plug	2
5325	Wrench, Lug	2	5325	Wrench, Lug	2
			5315	Wrench, Flare nut (set)	1
5320	Wrench, Ignition (set)	1	5320	Wrench, Ignition (set)	1
5340	Wrench, Pipe (10")	2	5340	Wrench, Pipe (10")	2
			5350	Wrench, Pipe (18")	1
5355	Wrench, Socket (1/4" drive) (set)	2	5355	Wrench, Socket (1/4" drive) (set)	2
5360	Wrench, Socket (3/8" drive) (set)	4	5360	Wrench, Socket (3/8" drive) (set)	4
5365	Wrench, Socket (1/2" drive) (set)	6	5365	Wrench, Socket (1/2" drive) (set)	6
			5370	Wrench, Socket (metric) (set)	2
			5375	Wrench, Socket, Flex handle (3/8" drive)	2
			5380	Wrench, Socket, Flex handle (1/2" drive)	2
5385	Wrench, Socket, Handle extension (3/8" drive) (4")	2	5385	Wrench, Socket, Handle extension (3/8" drive) (4")	2
5390	Wrench, Socket, Handle extension (3/8" drive) (3")	2	5390	Wrench, Socket, Handle extension (3/8" drive) (3")	2
5395	Wrench, Socket, Handle extension (3/8" drive) (set)	2	5395	Wrench, Socket, Handle extension (3/8" drive) (set)	2
5400	Wrench, Socket, Handle extension (1/2" drive) (3")	2	5400	Wrench, Socket, Handle extension (1/2" drive) (3")	2
					15

5405	Wrench, Socket, Handle extension (1/2" drive) (8")	2
5410	Wrench, Socket, Handle extension (1/2" drive) (set)	2
5415	Wrench, Socket, Reversible ratchet handle (1/4" drive)	2
5420	Wrench, Socket, Reversible ratchet handle (3/8" drive)	4
5425	Wrench, Socket, Reversible ratchet handle (1/2" drive)	6
5430	Wrench, Socket, Speed handle (1/4" drive)	2
5435	Wrench, Socket, Speed handle (3/8" drive)	4
5440	Wrench, Socket, Speed handle (1/2" drive)	6
5450	Wrench, Socket, Universal joint attachment (3/8" drive) (set)	2
5455	Wrench, Socket, Universal joint attachment (1/2" drive) (set)	4
5460	Wrench, Tappet (set)	1
5465	Wrench, Torque (3/8" drive)	1
5470	Wrench, Torque (1/2" drive)	1

II. Machines and General Equipment

Code	Item	Number
0045	Anvil	1
0130	Battery Eliminator and Charger	1
0350	Bleeder, Brake	1

5405	Wrench, Socket, Handle extension (1/2" drive) (8")	2
5410	Wrench, Socket, Handle extension (1/2" drive) (set)	2
5415	Wrench, Socket, Reversible ratchet handle (1/4" drive)	2
5420	Wrench, Socket, Reversible ratchet handle (3/8" drive)	4
5425	Wrench, Socket, Reversible ratchet handle (1/2" drive)	6
5430	Wrench, Socket, Speed handle (1/4" drive)	2
5435	Wrench, Socket, Speed handle (3/8" drive)	4
5440	Wrench, Socket, Speed handle (1/2" drive)	6
5445	Wrench, Socket, Universal joint attachment (1/4" drive)	2
5450	Wrench, Socket, Universal joint attachment (3/8" drive) (set)	2
5455	Wrench, Socket, Universal joint attachment (1/2" drive) (set)	4
5460	Wrench, Tappet (set)	1
5465	Wrench, Torque (3/8" drive)	1
5470	Wrench, Torque (1/2" drive)	1

II. Machines and General Equipment

Code	Item	Number
0020	Aligner, Connecting rod	1
0030	Alternator-Generator-Regulator Test Stand	1
0035	Analyzer, Capacitor	1
0040	Analyzer, Engine	1
0045	Anvil	1
0130	Battery Eliminator and Charger	1
0350	Bleeder, Brake	1
0420	Boring Bar (cylinder set)	1

0695	Can, Oil filler and measure (1 qt.)	2	0455	Brake, Service shop machine	1
0700	Can, Oil filler and measure (2 qt.)	1	0690	Can, Carwash	1
0705	Can, Oil filler and measure (5 qt.)	1	0695	Can, Oil filler and measure (1 qt.)	2
0710	Can, Oily waste	3	0700	Can, Oil filler and measure (2 qt.)	1
0720	Can, Safety (1 qt.)	3	0705	Can, Oil filler and measure (5 qt.)	1
0725	Can, Safety (1 gal.)	2	0710	Can, Oily waste	3
0955	Cleaner, Spark plug	1	0715	Can, Radiator	1
1330	Drill, Electric, Portable (1/4")	2	0720	Can, Safety (1 qt.)	3
1335	Drill, Electric, Portable (3/8")	1	0725	Can, Safety (1 gal.)	2
1435	Engine, Automobile	1	0735	Carburetor Repair set	1
1440	Engine, Diesel	1	0955	Cleaner, Spark plug	1
1445	Engine, Outboard motor	1	0960	Cleaner, Valve guide	1
1455	Engine, Small (2-cycle)	1	0965	Clutch Aligner	1
1460	Engine, Small (4-cycle)	1	1075	Crane, Portable	1
1470	Engine, Turbine (small)	1	1330	Drill, Electric, Portable (1/4")	2
1930	Grease Gun	1	1335	Drill, Electric, Portable (3/8")	1
1965	Grinder, Edge tool (bench)	1	1340	Drill, Electric, Portable (1/2")	1
2005	Growler, Armature testing	1	1435	Engine, Automobile	1
2010	Gun, Engine cleaning	1	1440	Engine, Diesel	1
2150	Hoist, Double post	1	1445	Engine, Outboard motor	1
2155	Hoist, Single post	1	1450	Engine, Rocket (small or model)	1
			1455	Engine, Small (2-cycle)	1
			1460	Engine, Small (4-cycle)	1
			1465	Engine, Steam (model)	1
			1470	Engine, Turbine (small)	1
			1670	Funnel, Longspout, Automatic transmission	1
			1705	Galvanometer	1
			1930	Grease Gun	1
			1935	Grease Gun, Chassis	1
			1940	Grease Gun, Extended interval	1
			1945	Grease Gun, Gear lube	1
			1965	Grinder, Edge tool (bench)	1
			1970	Grinder, Flexible shaft	1
			1985	Grinder, Pedestal	1
			1995	Grinder, Valve (set)	1
			2005	Growler, Armature testing	1
			2010	Gun, Engine cleaning	1
			2150	Hoist, Double post	1
			2155	Hoist, Single post	1

2160	Hone, Brake cylinder (set)	1	2160	Hone, Brake cylinder (set)	1
			2165	Hone, Cylinder (to 7")	1
			2170	Hone, Pin	1
			2195	Hydraulic Instruction Unit	1
2215	Jack, Auto bumper (double-saddle type)	1	2215	Jack, Auto bumper (double-saddle type)	1
2220	Jack, Auto, Hydraulic (floor type) (1½ ton)	2	2220	Jack, Auto, Hydraulic (floor type) (1½ ton)	2
2225	Jack, Auto, Hydraulic (standard type) (1½ ton)	1	2225	Jack, Auto, Hydraulic (standard type) (1½ ton)	1
			2230	Jack, Auto, Hydraulic (standard type) (2 ton)	1
			2405	Lamps, Drying (set)	1
			2410	Lathe, Armature	1
			2415	Lathe, Metalworking (10")	1
			2470	Lift, Engine safety	1
			2665	Milliammeter, Volt-ohm	2
			2785	Motor Stand, Universal	2
			2795	Multiscope	1
			3190	Pneumatic Instruction Center (pneumatic power unit)	1
3195	Polisher, Body	1	3195	Polisher, Body	1
3250	Press, Drill (15")	1	3250	Press, Drill (15")	1
			3255	Press, Drill (17")	1
			3400	Puller, Auto body metal (set)	1
			3570	Radiator Test Plugs (set)	1
			3595	Reamer, Expansion (set)	1
			3605	Reamer, Valve seat (set)	1
			3615	Refacer, Valve (set)	1
			3655	Rheostat, 10 ohm	1
			3800	Sander, Finishing, Portable, Air	1
			4455	Spray Gun Outfit	1
			4725	Tachometer	1
			4740	Tank, Hot boiling	1
4745	Tank, Parts cleaning, Solvent	1	4745	Tank, Parts cleaning, Solvent	1
			4820	Tester, Coil and condenser	1
			4825	Tester, Distributor	1
			4975	Transformer, Step-down	1
			4980	Transformer, Step-up	1
			5065	Truck, Welding cylinder	1
5140	Vise, Machinist's bench	1	5140	Vise, Machinist's bench	1
			5185	Welder, Arc	1

5520	Welding Outfit, Oxyacetylene	1
5235	Wheel Alignment Set	1
5240	Wheel Balancer	1

III. General Furnishings

Code	Item	Number
0210	Bench, Metalworking (4 place)	2
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	12
0540	Cabinet, Filing	1
0755	Chair, Teacher's	1
1025	Compressor, Air	1
1235	Desk, Teacher's	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1
2175	Hose, Air	1
2180	Hose, Exhaust, Garage	1
2185	Hose, Water	1
2932	Pan, Dust	1
2980	Pencil Sharpener, Standard	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
4010	Screen, Projection	1
4580	Stand, Auto safety (2 ton)	20
4585	Stand, Auto safety (7 ton)	6
4690	Table, Overhead projector	1

III. General Furnishings

Code	Item	Number
0210	Bench, Metalworking (4 place)	2
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	12
0540	Cabinet, Filing	1
0755	Chair, Teacher's	1
1025	Compressor, Air	1
1235	Desk, Teacher's	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1
2175	Hose, Air	1
2180	Hose, Exhaust, Garage	1
2185	Hose, Water	1
2932	Pan, Dust	1
2980	Pencil Sharpener, Standard	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
4010	Screen, Projection	1
4580	Stand, Auto safety (2 ton)	20
4585	Stand, Auto safety (7 ton)	6
4690	Table, Overhead projector	1
5225	Welding Screen, Portable	1

CERAMICS

Introductory

I. Raw Material Preparation and Storage

Code	Item	Number
0425	Box, Clay storage, Portable	1
0525	Cabinet, Damp-proof	2

Advanced

I. Raw Material Preparation and Storage

Code	Item	Number
0425	Box, Clay storage, Portable	2
0525	Cabinet, Damp-proof	1
1585	Filter Press (laboratory model)	1

19

2790	Muller Mixer	1
3385	Pug Mill, Extrusion	1
3380	Pug Mill, Vertical	1
3440	Pulverizer, Laboratory model	1
4625	Storage Unit, Clay	1
5175	Wedging Boards	1
5180	Wedging Table	1

II. Material Forming

Code	Item	Number
0110	Banding Wheel, Potter's bench	6
0200	Bench, Marble slab	1
0375	Blunger	1
1385	Dry Press	1
1520	Extrusion Machine, Auger type	1
2250	Jigger, Electric (industrial model)	1
2350	Knife, Mold maker's	6
2695	Mixer, Slow speed (portable)	1
2705	Modeling Tool (set)	6
3050	Plaster Working Tool	6
3200	Potter's Wheel, Electric	1
3205	Potter's Wheel, Kick	1
3210	Potter's Wheel, Side-kick	1
4705	Table, Casting	1
4735	Tank, Agitated storage	1
4895	Throwing Ribs, Wooden (set)	6
5245	Wheel Turning Tool (set)	1

III. Glazing

Code	Item	Number
0105	Ball Mill, Roller type	1
0555	Cabinet, Glaze and library	1
1025	Compressor, Air	1
1915	Graduate, Cylinder (100cc)	3

2790	Muller Mixer	1
3370	Pug Mill, Laboratory model	1
3375	Pug Mill, Studio model	1
3380	Pug Mill, Vertical	1
4625	Storage Unit, Clay	2
5180	Wedging Table	1

II. Material Forming

Code	Item	Number
0110	Banding Wheel, Potter's bench	12
0200	Bench, Marble slab	1
0375	Blunger	1
1385	Dry Press	1
1520	Extrusion Machine, Auger type	1
2250	Jigger, Electric (industrial model)	1
2350	Knife, Mold maker's	6
2695	Mixer, Slow speed (portable)	1
2705	Modeling Tool (set)	6
3050	Plaster Working Tool	6
3200	Potter's Wheel, Electric	2
3205	Potter's Wheel, Kick	2
3210	Potter's Wheel, Side-kick	2
4705	Table, Casting	1
4735	Tank, Agitated storage	1
4895	Throwing Ribs, Wooden (set)	6
5245	Wheel Turning Tool (set)	1

III. Glazing

Code	Item	Number
0105	Ball Mill, Roller type	2
0555	Cabinet, Glaze and library	1
1025	Compressor, Air	1
1915	Graduate, Cylinder (100cc)	3

1920	Graduate, Cylinder (500cc)	3
2240	Jars, Grinding	3
2770	Mortar and Pestle	6
3945	Scale, Laboratory	1
3960	Scale, Triple beam	1
4115	Seive, Test laboratory	6
4445	Spray Booth, Dry	1
4460	Spray Gun, Touch-up	1

IV. Enameling

Code	Item	Number
0065	Atomizer	1
1595	Firing Racks	3
1645	Fork, Firing	1
2290	Kiln, Enameling	1
4175	Sifter	2
5040	Trivets	3

V. Firing

Code	Item	Number
1680	Furnace, Crucible	1
2280	Kiln Cut-Off, Automatic (heat control device)	1
2285	Kiln, Electric	1
2295	Kiln, Front loading	
2300	Kiln, Gas	1
2305	Kiln, Starter	1
2310	Kiln, Top loading	1
3510	Pyrometer, Optical	1
3515	Pyrometer, Portable	1
3520	Pyrometer, Radiation	1

VI. Decoration—Finishing

Code	Item	Number
0015	Airbrush	1
0530	Cabinet, Drying	1
2325	Knife, Fettling	1
3990	Scraper, Flexible	1
4000	Scraper, Rigid	1
5170	Ware Truck	1

1920	Graduate, Cylinder (500cc)	3
2240	Jars, Grinding	3
2770	Mortar and Pestle	6
3945	Scale, Laboratory	1
3960	Scale, Triple beam	1
4115	Seive, Test laboratory	6
4445	Spray Booth, Dry	1
4460	Spray Gun, Touch-up	1

IV. Enameling

Code	Item	Number
0065	Atomizer	1
1595	Firing Racks	3
1645	Fork, Firing	1
2290	Kiln, Enameling	1
4175	Sifter	3
5040	Trivets	3

V. Firing

Code	Item	Number
1680	Furnace, Crucible	1
2280	Kiln Cut-Off, Automatic (heat control device)	1
2285	Kiln, Electric	1
2295	Kiln, Front loading	
2300	Kiln, Gas	1
2305	Kiln, Starter	1
2310	Kiln, Top loading	1
3510	Pyrometer, Optical	1
3515	Pyrometer, Portable	1
3520	Pyrometer, Radiation	1

VI. Decoration—Finishing

Code	Item	Number
0015	Airbrush	1
0530	Cabinet, Drying	1
2325	Knife, Fettling	1
3990	Scraper, Flexible	1
4000	Scraper, Rigid	1
5170	Ware Truck	1

VII. Cast Stone

Code	Item	Number
2570	Mason's Tools, Cement (set)	1
2775	Mortar Box	1

VIII. General Furnishings and Hand Tools

Code	Item	Number
0255	Bench, Woodworking (4 place)	1
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	6
0540	Cabinet, Filing	1
0720	Can, Safety (1 qt.)	2
0725	Can, Safety (1 gal.)	2
0755	Chair, Teacher's	1
1235	Desk, Teacher's	1
1355	Drill, Hand (3/8")	1
1590	Finishing Rubber	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1
1710	Gauge, Auger bit	1
1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1
1900	Goggles (spectacles), Clear observation	12
1960	Grinder-Buffer, Bench, Combination	1
2475	Lift, Pallet	1
2765	Molds, Ceramics, Assorted	6
2932	Pan, Dust	1
2980	Pencil Sharpener, Standard	1
3085	Pliers, Combination (6")	2
3250	Press, Drill (15")	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1

VII. Cast Stone

Code	Item	Number
2570	Mason's Tools, Cement (set)	1
2775	Mortar Box	1

VIII. General Furnishings and Hand Tools

Code	Item	Number
0255	Bench, Woodworking (4 place)	1
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	6
0540	Cabinet, Filing	1
0720	Can, Safety (1 qt.)	2
0725	Can, Safety (1 gal.)	2
0755	Chair, Teacher's	1
1125	Crusher, Jaw (laboratory model)	1
1235	Desk, Teacher's	1
1355	Drill, Hand (3/8")	1
1590	Finishing Rubber	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1
1710	Gauge, Auger bit	1
1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1
1900	Goggles (spectacles), Clear observation	12
1960	Grinder-Buffer, Bench, Combination	1
2475	Lift, Pallet	1
2765	Molds, Ceramics, Assorted	6
2932	Pan, Dust	1
2980	Pencil Sharpener, Standard	1
3085	Pliers, Combination (6")	2
3250	Press, Drill (15")	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1

3345	Projector, Motion picture, Sound	1	3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1	3350	Projector, Overhead	1
4010	Screen, Projection	1	3450	Pump, Slip, Duplex	1
4165	Shield, Face	6	4010	Screen, Projection	1
4415	Sponge, Elephant ear shape	3	4165	Shield, Face	6
4420	Sponge, Sheep wool	3	4415	Sponge, Elephant ear shape	6
4690	Table, Overhead projector	1	4420	Sponge, Sheep wool	6
			4440	Spray Booth, Ceramic	1
			4690	Table, Overhead projector	1

DRAFTING

Introductory			Advanced		
I. Audio-Visual Equipment			I. Audio-Visual Equipment		
Code	Item	Number	Code	Item	Number
0985	Compass, Chalkboard	1	0985	Compass, Chalkboard	1
1275	Display Board	1	1275	Display Board	1
1280	Divider, Blackboard	1	1280	Divider, Blackboard	1
3325	Projection Box, Plastic	1			
			3330	Projection Box, Plastic, Instructor's	1
			3335	Projection Box, Plastic, Student's	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1	3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1	3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1	3350	Projector, Overhead	1
3355	Protractor, Chalkboard	1	3355	Protractor, Chalkboard	1
3930	Scale, Chalkboard (demonstration)	1	3930	Scale, Chalkboard (demonstration)	1
4010	Screen, Projection	1	4010	Screen, Projection	1
5020	Triangle, Chalkboard, 30°-60°	1	5020	Triangle, Chalkboard, 30°-60°	1
5025	Triangle, Chalkboard, 45°	1	5025	Triangle, Chalkboard, 45°	1
II. Instruments and Tools			II. Instruments and Tools		
Code	Item	Number	Code	Item	Number
0480	Brush, Duster, Draftsman's	24	0480	Brush, Duster, Draftsman's	24

0975	Compass and Divider (set)	24
0980	Compass, Beam	4
1130	Curve, Irregular (set)	1
1200	Cutter, Paper	1
1265	Dispenser, Drafting tape	2
1480	Eraser Shields	24
2455	Lettering Guide Line Instrument	24
2880	Oilstone, Arkansas	1
2965	Pencil Pointer, Lead pencil	24
2970	Pencil Pointer, Mechanical	1
2975	Pencil Sharpener, Draftsman's	1
2980	Pencil Sharpener, Standard	1
3365	Protractor, Semi-circular	6
3925	Scale, Architect's	24
3950	Scale, Mechanical engineer's	6
3965	Scissors	1

0975	Compass and Divider (set)	24
0980	Compass, Beam	4
0990	Compass, Drop bow	1
1130	Curve, Irregular (set)	1
1135	Curve, Rule (adjustable)	1
1200	Cutter, Paper	1
1265	Dispenser, Drafting tape	2
1285	Divider, Proportional	2
1480	Eraser Shields	24
1655	Fountain Pen (technical set)	6
1870	Geometric Shapes (set)	1
2455	Lettering Guide Line Instrument	12
2460	Lettering Set	1
2880	Oilstone, Arkansas	1
2935	Pantograph, Drafting	1
2950	Pen Holder	24
2955	Pen Set	24
2960	Pen, Speedball (set)	1
2965	Pencil Pointer, Lead pencil	24
2970	Pencil Pointer, Mechanical	1
2975	Pencil Sharpener, Draftsman's	1
2980	Pencil Sharpener, Standard	1
3365	Protractor, Semi-circular	6
3630	Repair Kit, Drafting instrument	1
3925	Scale, Architect's	24
3935	Scale, Decimal, Civil engineer's	12
3950	Scale, Mechanical engineer's	12
3955	Scale, Metric	1
3965	Scissors	1
4190	Sign-maker Set	1
4635	Straight Edge, Parallel ruling	12
4780	Template, Architectural	12
4785	Template, Electronic	6
4790	Template, Isometric circle	6
4795	Template, Isometric circle, Large	6
4800	Template, Large circle	24
4805	Template, Nuts and bolts	5

4990 Triangle, 30°-60° (8") 24

5000 Triangle, 45° (6") 24

5070 T Square 24

4995 Triangles, 30°-60°
(10" and 12") 24

5005 Triangle, 45° (8") 24

5010 Triangle, 45° (12") 3

5015 Triangle, Adjustable (10") 6

5070 T Square 24

III. Machines

Code	Item	Number
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2515	Machine, Reproduction (dry type)	1
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2520	Machine, Reproduction (moist type)	1
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2565	Marking Tool, Electric	1
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III. Machines

Code	Item	Number
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1485	Erasing, Machine, Elec.	1
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2505	Machine, Drafting (18")	8
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2510	Machine, Drafting (24")	4
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2515	Machine, Reproduction (dry type)	1
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2520	Machine, Reproduction (moist type)	1
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2565	Marking Tool, Electric	1
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IV. General Furnishings

Code	Item	Number
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0385	Board, Drafting	24
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0405	Bookcase	1
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0465	Broom, Push	2
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0470	Brush, Bench	12
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0540	Cabinet, Filing	1
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0620	Cabinet, Storage	2
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0755	Chair, Teacher's	1
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1235	Desk, Teacher's	1
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1240	Desk, Teacher's standing	1
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2932	Pan, Dust	1
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4610	Stool, Instructor's	1
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4615	Stool, Student's adjustable	24
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4670	Table, Drafting	24
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4690	Table, Overhead projector	1
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IV. General Furnishings

Code	Item	Number
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0385	Board, Drafting	24
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0405	Bookcase	1
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0465	Broom, Push	2
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0470	Brush, Bench	12
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0540	Cabinet, Filing	1
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0620	Cabinet, Storage	2
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0755	Chair, Teacher's	1
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1235	Desk, Teacher's	1
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1240	Desk, Teacher's standing	1
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1555	File, Drafting	1
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1660	Frame, Printing	1
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2932	Pan, Dust	1
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3550	Rack, Magazine	1
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4610	Stool, Instructor's	1
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4615	Stool, Student's adjustable	24
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4670	Table, Drafting	24
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4690	Table, Overhead projector	1
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4700	Table, Planning	1
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V. Miscellaneous

Code	Item	Number
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1250	Die, Letter (set)	1
1255	Die, Number (set)	1
1495	Extension Cord	1
1593	Fire Extinguisher	1
1600	First Aid Kit	1
1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1
2085	Hammer, Claw (16 oz.)	1
3155	Pliers, Straight nose	1
3495	Punch, Paper	1
4050	Screwdriver, Phillips (set)	1
4070	Screwdriver, Standard bit (round blade) (set)	1
4080	Screwdriver, Standard bit (square blade) (6")	1
4595	Stapler, Hand	1

V. Miscellaneous

Code	Item	Number
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0645	Caliper, Inside (6")	1
0655	Caliper, Outside (6")	1
1250	Die, Letter (set)	1
1255	Die, Number (set)	1
1495	Extension Cord	1
1593	Fire Extinguisher	1
1600	First Aid Kit	1
1800	Gauge, Screw pitch	1
1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1
2085	Hammer, Claw (16 oz.)	1
2315	Knife, Carving (set)	6
2625	Micrometer, Outside (1")	1
3155	Pliers, Straight nose	1
3495	Punch, Paper	1
3710	Rule, Flexible, Steel tape (12')	1
3723	Rule, Flexible, Steel tape (100')	1
4050	Screwdriver, Phillips (set)	1
4070	Screwdriver, Standard bit (round blade) (set)	1
4080	Screwdriver, Standard bit (square blade) (6")	1
4485	Square, Combination set (with protractor and center head)	1
4595	Stapler, Hand	1
4775	T Bevel, Sliding	1

ELECTRICITY-ELECTRONICS

Introductory

I. Small Tools and Equipment

Code	Item	Number
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0025	Alignment Tool (set)	2
0285	Bit, Auger (set)	1
0335	Bit, Screwdriver (set)	2
0340	Bit, Speed (set)	2
0430	Brace, Ratchet	1

Advanced

I. Small Tools and Equipment

Code	Item	Number
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0025	Alignment Tool (set)	2
0285	Bit, Auger (set)	1
0335	Bit, Screwdriver (set)	2
0340	Bit, Speed (set)	2
0430	Brace, Ratchet	1

0450	Brake, Box and pan	1	0450	Brake, Box and pan	1
0780	Chisel, Cold (set)	1	0780	Chisel, Cold (set)	1
0970	Coil Winder	1	0970	Coil Winder	1
1070	Countersink, High speed	1	1070	Countersink, High speed	1
1090	Crimping Tool	2	1090	Crimping Tool	2
1250	Die, Letter (set)	1	1250	Die, Letter (set)	1
1255	Die, Number (set)	1	1255	Die, Number (set)	1
1305	Divider, Wing	1	1305	Divider, Wing	1
1330	Drill, Electric, Portable (1/4")	1	1330	Drill, Electric, Portable (1/4")	1
1350	Drill, Hand (1/4")	1	1350	Drill, Hand (1/4")	1
1360	Drill Stand, Fractional	1	1360	Drill Stand, Fractional	1
1365	Drill, Twist (letter set)	1	1365	Drill, Twist (letter set)	1
1370	Drill, Twist (number set)	1	1370	Drill, Twist (number set)	1
1375	Drill, Twist, Straight shank (fractional set)	1	1375	Drill, Twist, Straight shank (fractional set)	1
1495	Extension Cord	2	1495	Extension Cord	2
1540	Files (see specifications for listing)		1540	Files (see specifications for listing)	
1550	File Card and Brush	6	1550	File Card and Brush	6
1565	File, Jeweler's (set)	1	1565	File, Jeweler's (set)	1
1570	File, Needle (set)	1	1570	File, Needle (set)	1
1710	Gauge, Auger bit	1	1710	Gauge, Auger bit	1
1800	Gauge, Screw pitch	1	1800	Gauge, Screw pitch	1
1830	Gauge, Thickness ("feeler")	1	1830	Gauge, Thickness ("feeler")	1
1855	Gauge, Wire and sheet metal (American)	1	1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1	1860	Gauge, Wire and sheet metal (U.S.S.)	1
1900	Goggles (spectacles), Clear observation	12	1900	Goggles (spectacles), Clear observation	12
1985	Grinder, Pedestal	1	1985	Grinder, Pedestal	1
2030	Hammer, Ball peen (12 oz.)	6	2030	Hammer, Ball peen (12 oz.)	6
2035	Hammer, Ball peen (16 oz.)	6	2035	Hammer, Ball peen (16 oz.)	6
2085	Hammer, Claw (16 oz.)	6	2085	Hammer, Claw (16 oz.)	6
2320	Knife, Electrician's	6	2320	Knife, Electrician's	6
2490	Light, Extension	2	2490	Light, Extension	2
2530	Magnet, Bar	24	2530	Magnet, Bar	24
2830	Nibbler, Hand operated	2	2830	Nibbler, Hand operated	2
2865	Oiler, Bench	1	2865	Oiler, Bench	1
2890	Oilstone, Combination, India	2	2890	Oilstone, Combination, India	2
2895	Oilstone, Combination, Silicon carbide	2	2895	Oilstone, Combination, Silicon carbide	2
3085	Pliers, Combination (6")	12	3085	Pliers, Combination (6")	12
3095	Pliers, Duckbill	6	3095	Pliers, Duckbill	6
3100	Pliers, Diagonal cutting	12	3100	Pliers, Diagonal cutting	12
3135	Pliers, Needle nose	12	3135	Pliers, Needle nose	12

3150	Pliers, Side-cutting (6")	12	3150	Pliers, Side-cutting (6")	12
3170	Pliers, Vise-grip wrench	3	3170	Pliers, Vise-grip wrench	3
3250	Press, Drill	1	3250	Press, Drill	1
3455	Punch, Center (set)	2	3455	Punch, Center (set)	2
3460	Punch, Chassis (round set)	1	3460	Punch, Chassis (round set)	1
3465	Punch, Chassis (square set)	1	3465	Punch, Chassis (square set)	1
3500	Punch, Pin (set)	2	3500	Punch, Pin (set)	2
3590	Reamer, Electrician's hand	1	3590	Reamer, Electrician's hand	1
3750	Rule, Steel (12")	6	3750	Rule, Steel (12")	6
3845	Saw, Coping	1	3845	Saw, Coping	1
3850	Saw, Hack (hand)	4	3850	Saw, Hack (hand)	4
3865	Saw, Hand, Crosscut	1	3865	Saw Hand, Crosscut	1
3965	Scissors	1	3965	Scissors	1
4030	Screwdriver, Insulated (set)	12	4030	Screwdriver, Insulated (set)	12
4050	Screwdriver, Phillips (set)	4	4050	Screwdriver, Phillips (set)	4
4055	Screwdriver, Retaining type	2	4055	Screwdriver, Retaining type	2
4150	Shear, Squaring foot	1	4150	Shear, Squaring foot	1
4165	Shield, Face	6	4165	Shield, Face	6
4250	Snip, Aviation (left)	2	4250	Snip, Aviation (left)	2
4255	Snip, Aviation (right)	2	4255	Snip, Aviation (right)	2
4275	Snips, Tinner's, Straight (#8)	3	4275	Snips, Tinner's, Straight (#8)	3
4295	Soldering Copper, Electric (60W)	6			
4310	Soldering Copper, Electric pencil	6	4310	Soldering Copper, Electric pencil	6
4335	Soldering Gun, Electric	4	4335	Soldering Gun, Electric	4
4480	Square, Combination	3	4480	Square, Combination	3
4490	Square, Steel framing	1	4490	Square, Steel framing	1
			4495	Square, Try (6")	6
4760	Tap and Die, NC (U.S. standard) (set)	1	4760	Tap and Die, NC (U.S. standard) (set)	1
4765	Tap and Die, NF (S.A.E.) (set)	1	4765	Tap and Die, NF (S.A.E.) (set)	1
4770	Tap and Die, Pipe (set)	1	4770	Tap and Die, Pipe (set)	1
5195	Welder, Spot	1	5195	Welder, Spot	1
5255	Wrench, Adjustable end (6")	4	5255	Wrench, Adjustable end (6")	4
5280	Wrench, Allen key (hex) (set)	2	5280	Wrench, Allen key (hex) (set)	2
5330	Wrench, Nutdriver (set)	2	5330	Wrench, Nutdriver (set)	2
5335	Wrench, Open end (set)	1	5335	Wrench, Open end (set)	1
5360	Wrench, Socket (3/8" drive) (set)	1	5360	Wrench, Socket (3/8" drive) (set)	1

II. Power Supply

Code	Item	Number
3320	Power Supply, Variable output	6

II. Power Supply

Code	Item	Number
3225	Power Supply, Variable output, Filtered	8
4180	Signal Generator	2

III. Test Equipment

Code	Item	Number
0730	Capacitor Substitution Box	1
2910	Oscilloscope	6
4185	Signal Tracer	2
4850	Tester, Transistor	1
4855	Tester, Tube	1

III. Test Equipment

Code	Item	Number
0730	Capacitor Substitution Box	1
2910	Oscilloscope	6
4185	Signal Tracer	2
4850	Tester, Transistor	1
4855	Tester, Tube	1

IV. Metering Equipment

Code	Item	Number
2575	Meter, Ammeter (AC)	1
2585	Meter, Battery tester	1

IV. Metering Equipment

Code	Item	Number
2575	Meter, Ammeter (AC)	1
2585	Meter, Battery tester	1
2590	Meter, Galvanometer	1
2595	Meter, Grip dip	1
2610	Meter, Volt-ohm (multi-range)	6
2615	Meter, VTVM	6

V. General Furnishings

Code	Item	Number
0190	Bench, Island-double-face	6
0405	Bookcase	1
0465	Broom, Push	3
0540	Cabinet, Filing	1
0565	Cabinet, Instrument storage	2
0590	Cabinet, Parts storage	1
0625	Cabinet, Tool storage	1
0755	Chair, Teacher's	1
1025	Compressor, Air	1
1235	Desk, Teacher's	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3

V. General Furnishings

Code	Item	Number
0170	Bench, Electric demonstration	1
0190	Bench, Island-double-face	6
0405	Bookcase	1
0465	Broom, Push	3
0540	Cabinet, Filing	1
0565	Cabinet, Instrument storage	2
0590	Cabinet, Parts storage	1
0625	Cabinet, Tool storage	1
0755	Chair, Teacher's	1
1025	Compressor, Air	1
1235	Desk, Teacher's	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3

1600	First Aid Kit	1	1600	First Aid Kit	1
2932	Pan, Dust	1	2932	Pan, Dust	1
2980	Pencil Sharpener, Standard	1	2980	Pencil Sharpener, Standard	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1	3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1	3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1	3350	Projector, Overhead	1
4010	Screen, Projection	1	4010	Screen, Projection	1
4690	Table, Overhead projector	1	4690	Table, Overhead projector	1

ELEMENTARY

Note:

Quantities of tools presented in this list are arranged into columns according to the requirements of different types of elementary school programs:

Column I—Schools with central activities room for approximately 24 students.

Column II—Activity room adjacent to regular classroom for 4-8 students.

Column III—Work bench(es) and/or tool cabinet in regular classroom—4-8 students.

Column IV—Portable tool kit or cabinet—4-24 students.

Grade level designations in the list are as follows:

A—recommended for K and grades 1-3

B—recommended for grades 4-6

C—recommended for grades 7-8 (when included as a part of the elementary school).

Code	Item	Column:	Quantities Recommended				Grade Level
			I	II	III	IV	
I. Woodworking Tools							
0090	Awl, Scratch		1	1	1	1	ABC
0185	Bench Hook		6	6	6	6	ABC
0220	Bench, Saw		1	1	1	1	ABC
0285	Bit, Auger (set)		1	1	1	1	ABC
0305	Bit, Expansive		1	1	1	1	BC
0430	Brace, Ratchet		2	2	2	2	ABC
0440	Brad Driver		1	1	1	1	ABC
0520	Burnisher		1	1	1	1	BC
0765	Chisel, Butt (set)		1	1	1	1	C
0775	Chisel, Carving (set)		1	1	1	1	ABC
0780	Chisel, Cold (set)		1	1	1	1	BC
0850	Clamp, Bar (36")		2	2	2	2	BC
0865	Clamp, "C" (2")		12	6	6	12	ABC
0870	Clamp, "C" (3")		24	12	12	24	BC
0940	Clamp, Spring (#2)		12	12	12	12	ABC

1350	Drill, Hand (1/4")	3	2	2	2	ABC
1540	Files (see specifications for listing)					
1550	File Card and Brush	4	2	2	2	ABC
1710	Gauge, Auger bit	1	1	1	1	ABC
2070	Hammer, Claw (7 oz.)	6	4	4	6	ABC
2075	Hammer, Claw (10 oz.)	6	4	4	6	ABC
2080	Hammer, Claw (13 oz.)	4	1	1	4	ABC
2260	Jointer (6")	1				BC
2360	Knife, Putty	1	1	1	1	ABC
2370	Knife, Sloyd	2	2	2	2	ABC
2690	Mitre Box	1			1	ABC
2800	Nail Set (1/16" tip)	1	1	1	1	ABC
2805	Nail Set (3/32" tip)	1	1	1	1	ABC
3000	Plane, Block	2	2	2	2	A
		6	4	4	6	BC
3040	Plane, Smoothing	1	1	1	1	C
3795	Sander, Finishing	1	1	1	1	BC
3820	Saw, Back	6	4	4	6	ABC
3840	Saw, Compass (set)	1	1	1	1	ABC
3845	Saw, Coping	12	8	8	12	ABC
3865	Saw, Hand, Crosscut	6	2	2	6	ABC
3910	Sawhorse (18")	8	4	4	8	ABC
3915	Sawjack	24	6	6	24	ABC
3980	Scraper, Cabinet	4			4	BC
3995	Scraper, Hand	2	2	2	2	ABC
5165	Vise, Woodworker's	2	2	2	2	ABC

II. Metalworking Tools

1305	Divider, Wing	1	1	1	1	ABC
1320	Dresser, Grinding wheel	1	1	1	1	ABC
1540	Files (see specifications for listing)					
1550	File Card and Brush	24	24	24	24	ABC
1570	File, Needle (set)	1	1	1	1	ABC
1855	Gauge, Wire and sheet metal (American)	1	1	1	1	ABC
1860	Gauge, Wire and sheet metal (U.S.S.)	1	1	1	1	ABC
2015	Hammer, Ball peen (2 oz.)	2	2	2	2	AEC
2020	Hammer, Ball peen (4 oz.)	4	4	4	4	AEC
2065	Hammer, Chipping	1	1	1	1	AEC
2290	Kiln, Enameling	1	1	1	1	BC
3455	Punch, Center (set)	1	1	1	1	EC
3480	Punch, Hand (set)	1	1	1	1	BC
3670	Riveter, "Pop" (set)	1	1	1	1	BC
3850	Saw, Hack (hand)	1	1	1	1	BC
4160	Sheet Metal Tool	1	1	1	1	BC
4260	Snip, Aviation (combination and straight)	1	1	1	1	ABC

4275	Snips, Tinner's, Straight (#8)	1	1	1	1	ABC
4295	Soldering Copper, Electric (60W)	1	1	1	1	BC

III. Plastics Tools

2190	Hot Plate, Electric	1			1	ABC
2915	Oven	1				ABC
4655	Strip Heater	1	1	1	1	ABC
4880	Thermoforming Press, Vacuum (small)	1				ABC

IV. Leatherworking Tools

0270	Beveler	5	5	5	5	ABC
0380	Board, Cutting	24	6	6	24	ABC
0810	Chisel, Thonging (4-prong)	1	1	1	1	ABC
0815	Chisel, Thonging (3-prong)	2	2	2	2	ABC
0820	Chisel, Thonging (single-prong) (1/8")	2	2	2	2	ABC
0825	Chisel, Thonging (single-prong) (3/32")	1	1	1	1	ABC
1525	Eyelet Setter	1	1	1	1	ABC
1740	Gauge, Draw	1			1	ABC
2315	Knife, Carving (set)	2	2	2	2	BC
2330	Knife, Head	1	1	1	1	ABC
2365	Knife, Skiving	2	2	2	2	ABC
2380	Knife, Swivel cutter	4	4	4	4	BC
2540	Mallet, Rawhide	12	4	4	12	ABC
3490	Punch, Leather, Revolving	1	1	1	1	BC
4125	Sewing Machine	1				BC
4215	Skife	2			2	ABC
4240	Snap Fastener (set)	2	1	1	2	ABC
4575	Stamp, Leather (see specifications for listing)					ABC
5125	Veiner, Leather stamp	3	3	3	3	ABC

V. Graphic Arts Tools

0460	Brayer, Block printing	4	4	4	4	BC
1160	Cutter, Linoleum (set) (push-type)	6	4	4	6	BC
1165	Cutter, Linoleum (set) (pull-type)	6	4	4	6	BC
3240	Press, Block printing	1	1	1	1	BC
4220	Slab, Inking	1	1	1	1	ABC

VI. Ceramics Tools

1880	Gloves, Asbestos (pair)	1				BC
2285	Kiln, Electric	1				ABC
2705	Modeling Tool (set)	3	3	3	3	ABC

3515	Pyrometer, Portable	1				ABC
4415	Sponge, Elephant ear shape	1	1	1	1	ABC
4605	Stilts, Kiln	144				ABC
5030	Triangle, Kiln	144				ABC

VII. Weaving

2500	Loom, Table	3			3	BC
2815	Needle, Knitting (pair)	12	6	6	12	BC
2825	Needle, Raffia (card)	24	8	8	24	ABC

VIII. General Furnishings

0175	Bench, Elementary, Work	6	1-6	2		ABC
0255	Bench, Woodworking (4 place)	6	2	2		ABC
0370	Blow Torch	1			1	BC
0405	Bookcase	1	1	1		ABC
0465	Broom, Push	3	3	3		ABC
0470	Brush, Bench	12	4	4	6	ABC
0510	Buffer, Pedestal	4				BC
0540	Cabinet, Filing	1	1	1		ABC
0620	Cabinet, Storage		1	1		ABC
0745	Cart, Stock	1			1	ABC
0750	Cart, Tool				1-2	ABC
0755	Chair, Teacher's	1	1	1		ABC
0995	Compass, Pencil	6	6	6	6	ABC
1150	Cutter, Glass	1	1	1	1	ABC
1235	Desk, Teacher's	1	1	1		ABC
1330	Drill, Electric, Portable (1/4")	1	1	1	1	ABC
1360	Drill Stand, Fractional	1	1	1	1	ABC
1375	Drill, Twist, Straight shank (fractional set)	1	1	1		ABC
1592	Fire Blanket	1	1	1	1	ABC
1593	Fire Extinguisher	2	2	2		ABC
1600	First Aid Kit	1	1	1	1	ABC
1620	Flocking Gun	1				BC
1890	Gloves, Rubber (pair)	1	1	1	1	ABC
1900	Goggles (spectacles), Clear observation	10	4	6	6	ABC
1960	Grinder-Buffer, Bench, Combination	1				BC
2560	Marker, Felt-tip, Color (set)	6	2	2	6	ABC
2865	Oiler, Bench	6	2	2	1	BC
2890	Oilstone, Combination, India	4	2	2	2	ABC
2932	Pan, Dust	1	1	1	1	ABC
2980	Pencil Sharpener, Standard	1	1	1		ABC
2985	Pencil, Woodburning	3	2	2	3	ABC
3085	Pliers, Combination (6")	2	1	1	2	ABC
3100	Pliers, Diagonal-cutting	2	2	2	2	ABC
3105	Pliers, Electrician's	1	1	1	1	A
3135	Pliers, Needle nose	1	1	1	1	ABC
3170	Pliers, Vise-grip wrench	1	1	1	1	BC

3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1	1	1	ABC
3345	Projector, Motion picture, Sound	1	1	1	ABC
3350	Projector, Overhead	1	1	1	ABC
3365	Protractor, Semi-circular	2	1	1	2 ABC
3700	Rule, Flexible, Steel tape (8')	1	1	1	1 ABC
3750	Rule, Steel (12')	2	2	2	2 ABC
3775	Sander, Band	1			BC
3830	Saw, Band, Wood-cutting	1			C
3835	Saw, Circular, Power	1	1		ABC
3885	Saw, Jig (scroll)	1			ABC
3900	Saw, Sabre (bayonet)	1		1	BC
3965	Scissors	2	2	2	2 ABC
4010	Screen, Projection	1	1	1	ABC
4065	Screwdriver, Standard bit (changeable blades) (set)	1	1	1	1 ABC
4070	Screwdriver, Standard bit (round blade) (set)	1	1	1	1 ABC
4165	Shield, Face	3	1	1	2 ABC
4335	Soldering Gun, Electric	1	1	1	1 C
4430	Spoons, Measuring (set)	1	1	1	1 ABC
4490	Square, Steel framing	3	1	1	2 ABC
4495	Square, Try (6')	6	2	2	6 ABC
4500	Square, Try (8')	4	2	2	4 ABC
4690	Table, Overhead projector	1	1	1	1 ABC
4775	T Bevel	1	1	1	1 C
5075	Tumbler, Lapidary	1	1	1	BC
5260	Wrench, Adjustable end (8')	1	1	1	1 ABC

GENERAL SHOP

Note:

Because general shop industrial arts experiences are considered exploratory and basic in nature, no equipment has been listed for advanced-level work.

General industrial arts provided in a general shop is intended to offer a wide variety of experiences. To that end, equipment has been listed for ten areas (ceramics, enameling, leatherwork, plastics, drafting, electricity, metal-working, power mechanics, woodworking, and graphic arts). Certain items of equipment appear to be basic to all general shop facilities and are listed under "I. General." Items listed in "I. General" are not repeated in the area sections which follow.

Quantities recommended for sections II through XIX are in terms of "per six students." If the facility being established is to offer a wide variety of experiences, the students would be distributed in small numbers per area and the quantities of tools can be scaled down. Conversely, if all of the students are concentrated in only two or three areas, the quantities listed should be slightly increased.

Quantities recommended for section I are in terms of the number needed for the entire program. Certain minor adjustments up or down may have to be made due to the emphasis placed on individual areas in the local facility.

I. General

Code	Item	Number
0085	Awl, Brad	2
0090	Awl, Scratch	3
0245	Bench, Wall type	2
0255	Bench, Woodworking (4 place)	5
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	12
0500	Brush, Wire	6
0510	Buffer, Pedestal	1
0540	Cabinet, Filing	2
0542	Cabinet, Finishing (storage)	1
0585	Cabinet, Paper and drawing storage	1
0625	Cabinet, Tool Storage	2
0645	Caliper, Inside (6")	2
0650	Caliper, Inside (8")	2
0655	Caliper, Outside (6")	2
0660	Caliper, Outside (8")	2
0710	Can, Oily waste	2
0720	Can, Safety (1 qt.)	4
0725	Can, Safety (1 gal.)	2
0755	Chair, Teacher's	1
0765	Chisel, Butt (set)	2
0940	Clamp, Spring (#2)	12
0995	Compass, Pencil	6
1025	Compressor, Air	1
1070	Countersink, High speed	2
1150	Cutter, Glass	1
1235	Desk, Teacher's	1
1250	Die, Letter (set)	1
1255	Die, Number (set)	1
1295	Divider, Spring (6")	1
1300	Divider, Spring (8")	1
1320	Dresser, Abrasive wheel	1
1330	Drill, Electric, Portable (1/4")	1
1495	Extension Cord	2
1540	File (see specifications for listing)	
1545	File, Auger bit	1
1550	File Card and Brush	6
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1

1855	Gauge, Wire and sheet metal (American)	2
1860	Gauge, Wire and sheet metal (U.S.S.)	2
1900	Goggles (spectacles), Clear observation	12
1980	Grinder, Oil tool	1
2130	Hammer, Soft face (4 oz.)	2
2360	Knife, Putty	3
2370	Knife, Sloyd	6
2535	Mallet, Hardwood	2
2540	Mallet, Rawhide (10 oz.)	2
2865	Oiler, Bench	3
2890	Oilstone, Combination, India	1
2895	Oilstone, Combination, Silicon carbide	1
2932	Pan, Dust	2
2980	Pencil Sharpener, Standard	1
3085	Pliers, Combination (6")	2
3090	Pliers, Combination (8")	2
3100	Pliers, Diagonal-cutting	2
3110	Pliers, End-cutting	2
3250	Press, Drill (15")	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
3455	Punch, Center (set)	2
3500	Punch, Pin (set)	1
3695	Rule, Flexible, Steel tape (6')	3
3750	Rule, Steel (12")	6
3760	Rule, Steel (36")	3
3780	Sander, Belt, Portable, Electric	1
3785	Sander, Combination belt and disc	1
3795	Sander, Finishing, Portable, Electric	1
3850	Saw, Hack (hand)	3
3855	Saw, Hack, Close quarter	1
3875	Saw, Jeweler's (4")	1
3965	Scissors	1

4010	Screen, Projection	1
4020	Screwdriver, Cabinet tip	2
4035	Screwdriver, Offset, Phillips (set)	1
4045	Screwdriver, Offset, Straight slot (set)	1
4050	Screwdriver, Phillips (set)	1
4070	Screwdriver, Standard bit (round blade) (set)	2
4100	Screwdriver, Standard bit ("stubby")	2
4165	Shield, Face	6
4275	Snips, Tinner's, Straight (#8)	2
4295	Soldering Copper, Electric (60W)	2
4455	Spray Gun Outfit	1
4480	Square, Combination	2
4485	Square, Combination set (with protractor and center head)	1
4490	Square, Steel framing	2
4595	Stapler, Hand	1
4615	Stool, Student's adjustable	6
4665	Table, Blueprint	1
4670	Table, Drafting	6
4690	Table, Overhead projector	1
4760	Tap and Die, NC (U.S. standard) (set)	1
4765	Tap and Die, NF (S.A.E.) (set)	1
4965	Trammel points	1
5135	Vise, Bench, Drill	1
5140	Vise, Machinist's bench	4
5160	Vise, Swivel	1
5255	Wrench, Adjustable end (6")	2
5260	Wrench, Adjustable end (8")	1
5265	Wrench, Adjustable end (10")	1
5270	Wrench, Adjustable end (12")	1
5280	Wrench, Allen key (hex) (set)	2

II. Ceramics (crafts)

Code	Item	Number
0425	Box, Clay storage, Portable	1
0525	Cabinet, Damp-proof	1
0530	Cabinet, Drying	1
2285	Kiln, Electric	1
2295	Kiln, Front loading	1
2705	Modeling Tool (set)	2
2765	Molds, Ceramics (assorted)	6
2840	Nipper, Tile	2
3200	Potter's Wheel, Electric	1
4750	Tank, Storage, Slip	1
5040	Trivets	6
5180	Wedging Table	1

III. Crafts—Enameling

Code	Item	Number
0065	Atomizer	1
1640	Fork, Enameling	2
2290	Kiln, Enameling	1
3535	Rack, Enameling	2
4175	Sifter	1
4950	Torch, Gas	1
5080	Tweezers, Bevel point	2

IV. Crafts—Leather

Code	Item	Number
0095	Awl, Stitching, Automatic	1
0830	Chisel, Thonging (set)	2
1080	Creaser, Adjustable edge	1
1525	Eyelet Setter	1
1535	Fid	1
2340	Knife, Leather	2
2365	Knife, Skiving	2
2380	Knife, Swivel cutter	6
2445	Leather Modeling Tool (set)	2
2820	Needle, Lacing	6
2985	Pencil, Woodburning	1
3490	Punch, Leather, Revolving	2
4140	Shear, Leather	2
4240	Snap Fastener (set)	2

4340	Spacer, Leather marker	2
4575	Stamp, Leather	2

V. Crafts—Plastics

Code	Item	Number
2750	Molding Press, Injection (small)	1
2915	Oven	1
4395	Spatula	1
4655	Strip heater	1
4875	Thermoforming Press, Vacuum (medium)	1

VI. Drafting Tools

Code	Item	Number
0385	Board, Drafting	6
0480	Brush, Duster, Draftsman's	6
0975	Compass and Divider (set)	6
0985	Compass, Chalkboard	1
1130	Curve, Irregular (set)	2
1200	Cutter, Paper	1
1480	Eraser Shields	6
2460	Lettering Set	1
2505	Machine, Drafting (18")	2
2520	Machine, Reproduction	1
2955	Pen Set	1
2965	Pencil Pointer, Lead pencil	1
3365	Protractor, Semi-circular	2
3495	Punch, Paper	1
3925	Scale, Architect's	6
3935	Scale, Decimal (civil engineer's)	1
4590	Staple Remover	1
4990	Triangle, 30°-60° (8")	6
5005	Triangle, 45° (8")	6
5020	Triangle, Chalkboard	1
5070	T Square	6

VII. Electricity—Hand Tools

Code	Item	Number
2575	Meter, Ammeter (AC)	1
2580	Meter, Ammeter (DC)	1

2585	Meter, Battery tester	1
2610	Meter, Volt-ohm (multi-range)	6
2615	Meter, VTVM	1
2910	Oscilloscope	1
3105	Pliers, Electrician's	2
3130	Pliers, Long nose	2
3215	Power Supply, Low voltage	1
3220	Power Supply, Variable output	1
3225	Power Supply, Variable output, Filtered	1
3460	Punch, Chassis (round set)	1
3465	Punch, Chassis (square set)	1
4030	Screwdriver, Insulated (set)	2
4180	Signal Generator	1
4335	Soldering Gun, Electric	2
4840	Tester, Neon lamp type	1
4855	Tester, Tube	1
4970	Transformer, Bell	3
5250	Wire Cutter and Stripper	3
5330	Wrench, Nutdriver (set)	6

VIII. Electricity—General Furnishings

Code	Item	Number
0165	Bench, Electric (with test panel)	1
1410	Electricity Demonstration Panel, Teacher's	1
1415	Electricity Training Panel, Student's	3
1420	Electronics Demonstration Panel, Teacher's	1
1425	Electronics Training Panel, Student's	3

IX. General Metals—Hand Tools

Code	Item	Number
0045	Anvil	1
0050	Apron, Foundry	2
0055	Apron, Welding	2

0145	Bellows, Molder's	1	3505	Punch, Tinner's (set)	1
0265	Bending Jig, Adjustable	1	3575	Rammer, Hardwood	1
0515	Bulb, Sponge	1	3660	Riddle, Foundry	1
0770	Chisel, Cape	2	3665	Rivet Set	1
0780	Chisel, Cold (set)	2	4105	Scriber	2
0870	Clamp, "C" (3")	3	4110	Seamer, Handy	1
0875	Clamp, "C" (4")	3	4170	Shovel, Square point	1
0880	Clamp, "C" (6")	3	4250	Snip, Aviation (left)	2
0885	Clamp, "C" (8")	6	4255	Snip, Aviation (right)	2
1140	Cutter, Bolt	1	4260	Snip, Aviation (combi- nation and straight)	2
1325	Drill, Blacksmith (set)	1	4265	Snips, Hawksbill	1
1500	Extractor, Screw (set)	1	4270	Snips, Tin, Curved blade	1
1615	Flask, Foundry (small)	3	4390	Sparklighter	6
1725	Gauge, Center	1	4410	Sponge, Bulb	1
1735	Gauge, Depth rule	1	4425	Spoon and Gate Cutter	2
1755	Gauge, Drill point	1	4475	Sprinkling Can	1
1880	Gloves, Asbestos (pair)	1	4510	Stake, Beakhorn	1
1885	Gloves, Leather (pair)	1	4520	Stake, Blowhorn	1
1905	Goggles, Gas welding	2	4530	Stake, Candle mold	1
1910	Goggles, Melter's	2	4540	Stake, Coppersmith square	1
2000	Groover, Hand (set)	1	4555	Stake, Hatchet	1
2020	Hammer, Ball peen (4 oz.)	3	4560	Stake, Hollow mandrel	1
2030	Hammer, Ball peen (12 oz.)	3	4570	Stake, Round head	1
2035	Hammer, Ball peen (16 oz.)	3	4915	Tongs, Blacksmith, Curved lip	1
2065	Hammer, Chipping	1	4920	Tongs, Crucible	1
2090	Hammer, Engineer's (40 oz.)	1	4925	Tongs, Pick-up	1
2100	Hammer, Forming	1	4950	Torch, Gas	1
2110	Hammer, Raising	1	4955	Torch, Propane (kit)	1
2115	Hammer, Riveting, Machinist's	1	5045	Trowel, Foundry	1
2120	Hammer, Setting	2	5050	Trowel, Square, Molder's	1
2135	Hammer, Soft face	2	5055	Trowel, Taper (heart) and leaf, Molder's	1
2140	Helmet, Welding (hand type)	4	5065	Truck, Welding cylinder	1
2145	Helmet, Welding (head type)	2	5155	Vise, Sheet metal	1
2400	Ladle, Bottom pour	1	5185	Welder, Arc	1
2450	Leggings, Molder's	2	5200	Welder, Spot (portable)	1
2625	Micrometer, Outside (1")	1	5220	Welding Outfit, Oxyacetylene	1
2630	Micrometer, Outside (2")	1	5225	Welding Screen, Portable	1
2635	Micrometer, Outside (3")	1			
2710	Mold, Ingot	2			
3125	Pliers, Lineman's	1			
3135	Pliers, Needle nose	2			
3145	Pliers, Round nose	2			
3500	Punch, Pin (set)	1			

X. Metals—Machines

Code	Item	Number
0115	Bar Folder	1
0260	Bender, Universal	1

0450	Brake, Box and pan	1
0510	Buffer, Pedestal	1
1635	Forge, Gas	1
1650	Forming Roll, Slip	1
1675	Furnace, Bench	1
1680	Furnace, Crucible	1
1985	Grinder, Pedestal	1
2415	Lathe, Metalworking (10")	1
2680	Milling Machine, Vertical	1
3235	Press, Arbor	1
3680	Rotary Machine, Combination	1
3860	Saw, Hack, Power	1
4130	Shaper, Metal	1
4150	Shear, Squaring foot	1

XI. Metals—General Furnishings

Code	Item	Number
0150	Bench, Arc welding	1
0180	Bench, Welding (gas)	1
0205	Bench, Metalworking (2 place)	4
0212	Bench, Molding	1
0225	Bench, Sheet metal (with stake plates)	1
0230	Bench, Soldering	1
0245	Bench, Wall type	2
1680	Furnace, Crucible	1

XII. Power Mechanics—Hand Tools

Code	Item	Number
0005	Adaptor, Socket	2
0010	Adaptor, Socket	2
1030	Compressor, Piston ring	1
1035	Compressor, Valve spring	1
1220	Cutter, Tubing	1
1605	Flaring Tool (set)	1
1625	Flywheel Holder	1
1730	Gauge, Cylinder pressure	1
1760	Gauge, Ignition (set)	1
1810	Gauge, Spark plug	1
1830	Gauge, Thickness ("feeler")	2
1865	Gear Puller	1

2035	Hammer, Ball peen (16 oz.)	3
3070	Pliers, Bent nose	2
3115	Pliers, Hose clamp, Radiator and gas line	1
3135	Pliers, Needle nose	2
3165	Pliers, Tru-arc (#2)	1
3170	Pliers, Vise-grip wrench	2
4285	Socket, Deep spark plug (13/16")	1
4290	Socket, Deep spark plug (1 1/8")	1
5280	Wrench, Allen key (hex) (set)	2
5290	Wrench, Combination box and open end (set)	1
5320	Wrench, Ignition (set)	1
5335	Wrench, Open end (set)	1
5340	Wrench, Pipe (10")	1
5350	Wrench, Pipe (18")	1
5360	Wrench, Socket (3/8" drive) (set)	1
5365	Wrench, Socket (1/2" drive) (set)	1
5420	Wrench, Socket, Reversible ratchet handle (3/8" drive)	1
5425	Wrench, Socket, Reversible ratchet handle (1/2" drive)	1
5465	Wrench, Torque (3/8" drive)	1

XIII. Power Mechanics—Machines

Code	Item	Number
1455	Engine, Small (2-cycle)	1
1460	Engine, Small (4-cycle)	1
1995	Grinder, Valve (set)	1
3615	Refacer, Valve (set)	1

XIV. Power Mechanics—General Furnishings

Code	Item	Number
0570	Cabinet, Mechanics, Roller	1

XV. Woodworking—Hand Tools

Code	Item	Number
0285	Bit, Auger (set)	1
0300	Bit, Electrician's	1
0305	Bit, Expansive	1
0320	Bit, Forstner (machine set)	1
0330	Bit, Plug cutter (set)	1
0335	Bit, Screwdriver (set)	1
0430	Brace, Ratchet	2
0520	Burnisher	1
0775	Chisel, Carving (set)	2
0790	Chisel, Gouge, Inside (set)	1
0805	Chisel, Socket firmer (set)	1
0835	Chisel, Wood turning (set)	2
0850	Clamp, Bar (36")	4
0855	Clamp, Bar (48")	4
0860	Clamp, Bar (60")	2
0910	Clamp, Handscrew (#3/o)	2
0915	Clamp, Handscrew (#0)	2
0920	Clamp, Handscrew (#1)	2
0925	Clamp, Handscrew (#2)	2
0930	Clamp, Handscrew (#3)	2
1065	Countersink Bit (for brace) (set)	1
1350	Drill, Hand (1/4")	1
1355	Drill, Hand (3/8")	1
1360	Drill Stand, Fractional	1
1375	Drill, Twist, Straight shank (fractional set)	1
1710	Gauge, Auger bit	1
1775	Gauge, Marking	3
2070	Hammer, Claw (7 oz.)	2
2080	Hammer, Claw (13 oz.)	3
2085	Hammer, Claw (16 oz.)	3
2245	Jig, Dowelling	1
2465	Level	1
2690	Mitre Box	1
2800	Nail Set (1/16" tip)	3
2835	Nipper, End cutting	1
2885	Oilstone, Carving tool slips (set)	1
2900	Oilstone, Gouge slip	1
2905	Oilstone, Slip	1
3000	Plane, Block	2

3010	Plane, Jack	2
3015	Plane, Jointer	1
3020	Plane, Junior jack	4
3040	Plane, Smoothing	2
3735	Rule, Maple (24")	6
3820	Saw, Back	2
3840	Saw, Compass (set)	2
3845	Saw, Coping	3
3865	Saw, Hand, Crosscut	1
3870	Saw, Hand, Rip	1
3980	Scraper, Cabinet	2
3995	Scraper, Hand	2
4405	Spokeshave, Straight	1
4500	Square, Try (8")	6
4620	Stop, Bench	6
5070	T Square	2

XVI. Woodworking—Machines

Code	Item	Number
2260	Jointer (6")	1
2435	Lathe, Wood turning	2
3675	Router, Portable, Electric	1
3830	Saw, Band, Wood-cutting	1
3835	Saw, Circular, Power	1
3885	Saw, Jig (scroll)	1
3895	Saw, Radial-arm, Power	1
3900	Saw, Sabre (bayonet)	1
4660	Surfacer (single surface planer)	1

XVII. Graphic Arts—Hand Tools

Code	Item	Number
0400	Bone Folder	3
0410	Borders, Decorations, Miscellaneous	1
0720	Can, Safety (1 quart)	2
0760	Chases, Platen	6
1000	Composing Stick (6")	6
1005	Composing Stick (10")	3
1155	Cutter, Lead and slug	1
1160	Cutter, Linoleum (set)	2
1200	Cutter, Paper	1
1655	Fountain Pen (technical set)	1

1690	Furniture, Wood, Fonts	1	4375	Spaces, Assorted fonts (24 point)	1
1765	Gauge, Line (12")	3	4380	Spaces, Assorted fonts (30 point)	1
1790	Gauge, Pin (sets)	6	4385	Spaces, Assorted fonts (36 point)	1
2335	Knife, Ink	2	4590	Staple Remover	1
2375	Knife, Stencil	2	4995	Triangle, 30°-60° (8")	2
2440	Leads (2 point) (25 lb. pkg.)	1	5005	Triangle, 45° (8")	2
2460	Lettering Set	1	5070	T Square	2
2860	Numbering Machine, Press	1	5085	Tweezers, Type	2
2955	Pen Set	1	5090	Type (see specifications for listing)	
2965	Pencil Pointer, Lead pencil	1			
3045	Planer, Type	2			
3495	Punch, Paper	1			
3525	Quoin, Hispeed	12	XVIII.	Graphic Arts—Machines	
3530	Quoin Key, Hispeed	2	Code	Item	Number
3620	Reglets, Wood Font	1	3045	Planer, Type	1
3685	Rule, Brass	1	3275	Press, Padding	1
3925	Scale, Architect's	6	3280	Press, Platen	1
4195	Silk Screen Unit	1	3290	Press, Platen, Hand lever	1
4235	Slugs (6 point) (25 lb. pkg.)	1	3295	Press, Proof	1
4345	Spaces, Assorted fonts (6 point)	1	3305	Press, Rubber stamp	1
4350	Spaces, Assorted fonts (8 point)	1	3320	Printmaker, Graphic arts	1
4355	Spaces, Assorted fonts (10 point)	1	4600	Stapler, Saddle	1
4360	Spaces, Assorted fonts (12 point)	1			
4365	Spaces, Assorted fonts (14 point)	1	XIX.	Graphic Arts—General Furnishings	
4370	Spaces, Assorted fonts (18 point)	1	Code	Item	Number
			0600	Cabinet, Proof press	1
			0630	Cabinet, Type, Double tier	1
			2205	Imposing Stone Table	1

GRAPHIC ARTS

Introductory			Advanced		
I. Basic Equipment			I. Basic Equipment		
Code	Item	Number	Code	Item	Number
0280	Binding Unit, Plastics	1	0015	Airbrush	1
0360	Block, Proofing	2	0280	Binding Unit, Plastics	1
0390	Boards, Pressing	4	0360	Block, Proofing	2
			0390	Boards, Pressing	4
0675	Camera, Range finder (35mm)	1	0670	Camera, Copying	1
			0675	Camera, Range finder (35mm)	1

0680	Camera (35mm) Single lens reflex	1	0680	Camera (35mm) Single lens reflex	1
0685	Camera, Reflex, Twin lens	2	0685	Camera, Reflex, Twin lens	2
1155	Cutter, Lead and slug	1	1155	Cutter, Lead and slug	1
1200	Cutter, Paper	1	1200	Cutter, Paper	1
1210	Cutter, Round corner	1	1210	Cutter, Round corner	1
			1230	Densitometer, Photo	1
1330	Drill, Electric, Portable (1/4")	1	1330	Drill, Electric, Portable (1/4")	1
1390	Dryer, Print	1	1390	Dryer, Print	1
			1395	Duplicating Machine, Spirit	1
			1400	Duplicating Machine, Stencil	1
1475	Enlarger, Photographic	1	1475	Enlarger, Photographic	2
1530	Ferrotypes Plate	4	1490	Exposure Frame	1
			1530	Ferrotypes Plate	4
			1580	Filter, Photo (set)	1
1895	Glue Pot	1	1630	Folding Machine	1
2190	Hot Plate, Electric	1	1895	Glue Pot	1
2205	Imposing Stone Table	1	2190	Hot Plate, Electric	1
			2205	Imposing Stone Table	1
2600	Meter, Light	1	2255	Jogger, Paper	1
2685	Mitering Machine	1	2600	Meter, Light	1
2850	Numbering Machine, Cleaner box	1	2685	Mitering Machine	1
2855	Numbering Machine, Hand	1	2850	Numbering Machine, Cleaner box	1
2860	Numbering Machine, Press	2	2855	Numbering Machine, Hand	1
2930	Pad Counter	1	2860	Numbering Machine, Press	2
			2930	Pad Counter	1
3045	Planer, Type	4	2990	Perforator	1
3062	Plate-maker	1	3045	Planer, Type	4
3245	Press, Copying	1	3062	Plate-maker	1
3260	Press, Hot stamping	1	3245	Press, Copying	1
3270	Press, Offset	1	3260	Press, Hot stamping	1
3275	Press, Padding	1	3270	Press Offset	1
3280	Press, Platen	1	3275	Press, Padding	1
			3280	Press, Platen	1
			3285	Press, Platen, Automatic feed	1
3290	Press, Platen, Hand lever	2	3290	Press, Platen, Hand lever	2
3295	Press, Proof	1	3295	Press, Proof	1
			3300	Press Proof, Reproduction	1
3305	Press, Rubber stamp	1	3305	Press, Rubber stamp	1
3310	Printer, Contact	1	3310	Printer, Contact	1
3320	Printmaker, Graphic arts	1	3320	Printmaker, Graphic arts	1

3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
3495	Punch, Paper	1
3525	Quoin, Hi-speed	48
3530	Quoin Key, Hi-speed	4
4195	Silk Screen Unit	2
4200	Sinks, Developing	1
4205	Sinks, Platemaking	1
4600	Stapler, Saddle	1
4650	String Holder, Cone	1
4730	Tanks, Film development	5
4885	Thermometer, Photographic	2
4905	Timer, Photographic (electric)	2
4910	Timer, Photographic (spring wound)	2
4985	Tray, Photographic	12
5035	Trimmer, Paper	1
5090	Type, Assorted (see specifications for actual listing)	
5110	Typewriter, Standard	1

II. Hand Tools and Miscellaneous Supplies

Code	Item	Number
0052	Apron, Rubber	2
0080	Awl, Bookbinder's	2
0400	Bone Folder	8
0460	Brayer, Block printing	2
0485	Brush, Flat padding	2
0475	Brush, Bookbinder's	2
0490	Brush, Opaque	6
0740	Cards, Alphabet (set)	2
0760	Chases, Platen	12
1000	Composing Stick (6")	24

3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
3495	Punch, Paper	1
3525	Quoin, Hi-speed	48
3530	Quoin Key, Hi-speed	4
4195	Silk Screen Unit	2
4200	Sinks, Developing	1
4205	Sinks, Platemaking	1
4600	Stapler, Saddle	1
4650	String Holder, Cone	1
4730	Tanks, Film development	5
4885	Thermometer, Photographic	2
4905	Timer, Photographic (electric)	2
4910	Timer, Photographic (spring wound)	2
4985	Tray, Photographic	12
5035	Trimmer, Paper	1
5060	Truck, Bindery	1
5090	Type, Assorted (see specifications for actual listing)	
5095	Typesetter, Linecasting	1
5100	Typesetter, Photo- headsetter	1
5105	Typewriter, Electric	1
5115	Vacuum Printing Frame	1

II. Hand Tools and Miscellaneous Supplies

Code	Item	Number
0052	Apron, Rubber	2
0080	Awl, Bookbinder's	2
0400	Bone Folder	8
0460	Brayer, Block printing	2
0485	Brush, Flat padding	2
0475	Brush, Bookbinder's	2
0490	Brush, Opaque	6
0495	Brush, Type	2
0740	Cards, Alphabet (set)	2
0760	Chases, Platen	12
1000	Composing Stick (6")	24

1005	Composing Stick (10")	6	1005	Composing Stick (10")	6
1010	Composing Stick (12")	2	1010	Composing Stick (12")	2
1015	Composing Stick (15")	1	1015	Composing Stick (15")	1
1020	Composing Stick, Micrometer knee (10")	1	1020	Composing Stick, Micrometer knee (10")	1
1160	Cutter, Linoleum (set)	6	1160	Cutter, Linoleum (set)	6
1250	Die, Letter (set)	1	1250	Die, Letter (set)	1
1255	Die, Number (set)	1	1255	Die, Number (set)	1
1260	Dispenser, Cellophane tape	3	1260	Dispenser, Cellophane tape	3
1270	Dispenser, Gummed paper	1	1270	Dispenser, Gummed paper	1
1350	Drill, Hand (1/4")	1	1350	Drill, Hand (1/4")	1
1355	Drill, Hand (3/8")	1	1355	Drill, Hand (3/8")	1
1360	Drill Stand, Fractional	1	1360	Drill Stand, Fractional	1
1375	Drill, Twist, Straight shank (fractional set)	1	1375	Drill, Twist, Straight shank (fractional set)	1
1540	File (see specifications for set detail)		1540	File (see specifications for set detail)	
1550	File Card and Brush	1	1550	File Card and Brush	1
1690	Furniture, Wood, Fonts	4	1690	Furniture, Wood, Fonts	4
			1695	Galley (10" x 16")	6
			1700	Galley (8 1/4" x 13")	100
1710	Gauge, Auger bit	1	1710	Gauge, Auger bit	1
1765	Gauge, Line (12")	12	1765	Gauge, Line (12")	12
1770	Gauge, Line (18")	6	1770	Gauge, Line (18")	6
1790	Gauge, Pin (sets)	6	1790	Gauge, Pin (sets)	6
1840	Gauge, Type high	1	1840	Gauge, Type high	1
1855	Gauge, Wire and sheet metal (American)	1	1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1	1860	Gauge, Wire and sheet metal (U.S.S.)	1
1892	Gloves, Thick rubber	2	1892	Gloves, Thick rubber	2
1925	Graduate, Darkroom	6	1925	Graduate, Darkroom	6
1930	Grease Gun	1	1930	Grease Gun	1
2050	Hammer, Bookbinder's backing	2	2050	Hammer, Bookbinder's backing	2
2085	Hammer, Claw (16 oz.)	1	2085	Hammer, Claw (16 oz.)	1
2335	Knife, Ink	12	2335	Knife, Ink	12
2345	Knife, Make ready and stripping	12	2345	Knife, Make ready and stripping	12
2355	Knife, Padding	2	2355	Knife, Padding	2
2480	Light, Darkroom	4	2480	Light, Darkroom	4
2485	Light, Flood	4	2485	Light, Flood	4
2495	Locks, Magnetic galley	25	2495	Locks, Magnetic galley	25
2525	Magnifiers	4	2525	Magnifiers	4
2540	Mallet, Rawhide	2	2540	Mallet, Rawhide	2
2560	Marker, Felt-tip, Color (set)	6	2560	Marker, Felt-tip, Color (set)	6
2810	Needle Binding	24	2810	Needle Binding	24
2865	Oiler, Bench	4	2865	Oiler, Bench	4
2870	Oiler, Pump	4	2870	Oiler, Pump	4

2890	Oilstone, Combination, India	1
2895	Oilstone, Combination, Silicon carbide	1
3085	Pliers, Combination (6")	2
3170	Pliers, Vise-grip wrench	2
3730	Rule, Make-up	12
3820	Saw, Back	1
3890	Saw, Printer's trim	1
3965	Scissors	6
4015	Screens, Halftone, Contact	6
4070	Screwdriver, Standard bit (round blade) (set)	6
4210	Siphon, Photo	1
4355	Spaces, Assorted fonts (10 point) (see specifications for listing)	
4360	Spaces, Assorted fonts (12 point) (see specifications for listing)	
4370	Spaces, Assorted fonts (18 point) (see specifications for listing)	
4490	Square, Steel framing	1
4595	Stapler, Hand	1
4990	Triangle, 30°-60° (8")	8
5000	Triangle, 45° (6")	8
5070	T Square	4
5085	Tweezers, Type	12
5255	Wrench, Adjustable end (6")	1
5360	Wrench, Socket (3/8" drive) (set)	1
5365	Wrench, Socket (1/2" drive) (set)	1

III. General Furnishings

Code	Item	Number
0155	Bench, Bookbinding (unit)	1
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	12
0535	Cabinet, Drying rack	1
0540	Cabinet, Filing	1
0550	Cabinet, Galley	2

2890	Oilstone, Combination, India	1
2895	Oilstone, Combination, Silicon carbide	1
3085	Pliers, Combination (6")	2
3170	Pliers, Vise-grip wrench	2
3730	Rule, Make-up	12
3820	Saw, Back	1
3890	Saw, Printer's trim	1
3965	Scissors	6
4015	Screens, Halftone, Contact	6
4070	Screwdriver, Standard bit (round blade) (set)	6
4210	Siphon, Photo	1
4355	Spaces, Assorted fonts (10 point) (see specifications for listing)	
4360	Spaces, Assorted fonts (12 point) (see specifications for listing)	
4370	Spaces, Assorted fonts (18 point) (see specifications for listing)	
4490	Square, Steel framing	1
4595	Stapler, Hand	1
4990	Triangle, 30°-60° (8")	8
5000	Triangle, 45° (6")	8
5070	T Square	4
5085	Tweezers, Type	12
5255	Wrench, Adjustable end (6")	1
5360	Wrench, Socket (3/8" drive) (set)	1
5365	Wrench, Socket (1/2" drive) (set)	1

III. General Furnishings

Code	Item	Number
0155	Bench, Bookbinding (unit)	1
0160	Bench, Demonstration	1
0405	Bookcase	1
0465	Broom, Push	3
0470	Brush, Bench	12
0535	Cabinet, Drying rack	1
0540	Cabinet, Filing	1
0545	Cabinet, Film cutter	1
0550	Cabinet, Galley	2

0560	Cabinet, Ink and roller	1	0560	Cabinet, Ink and roller	1
0595	Cabinet, Plate filing	1	0595	Cabinet, Plate filing	1
0605	Cabinet, Quarter case	1	0605	Cabinet, Quarter case	1
0620	Cabinet, Storage	1	0620	Cabinet, Storage	1
0635	Cabinet, Type, Single tier	2	0635	Cabinet, Type, Single tier	4
0710	Can, Oily waste	2	0710	Can, Oily waste	2
0720	Can, Safety (1 qt.)	2	0720	Can, Safety (1 qt.)	2
0725	Can, Safety (1 gal.)	2	0725	Can, Safety (1 gal.)	2
0728	Can, Safety (5 gal.)	1	0728	Can, Safety (5 gal.)	1
0755	Chair, Teacher's	1	0755	Chair, Teacher's	1
1025	Compressor, Air	1	1025	Compressor, Air	1
1045	Container, Benzene (1 pt.)	4	1045	Container, Benzene (1 pt.)	4
1050	Container, Benzene (1 gal.)	2	1050	Container, Benzene (1 gal.)	2
1055	Container, Benzene (5 gal.)	1	1055	Container, Benzene (5 gal.)	1
1235	Desk, Teacher's	1	1235	Desk, Teacher's	1
1592	Fire Blanket	1	1592	Fire Blanket	1
1593	Fire Extinguisher	3	1593	Fire Extinguisher	3
1600	First Aid Kit	1	1600	First Aid Kit	1
1900	Goggles (spectacles), Clear observation	6	1900	Goggles (spectacles), Clear observation	6
2932	Pan, Dust	1	2932	Pan, Dust	1
2980	Pencil Sharpener, Standard	1	2980	Pencil Sharpener, Standard	1
3560	Rack, Roll, Tympan	1	3560	Rack, Roll, Tympan	1
3565	Rack, Roll, Wrapping paper	1	3565	Rack, Roll, Wrapping paper	1
4010	Screen, Projection	1	4010	Screen, Projection	1
4165	Shield, Face	3	4165	Shield, Face	3
4680	Table, General purpose	3	4680	Table, General purpose	3
4685	Table, Opaquing	4	4685	Table, Opaquing	4
4690	Table, Overhead projector	1	4690	Table, Overhead projector	1
4695	Table, Pilot press	2	4695	Table, Pilot press	2
4720	Table, Typewriter	1	4720	Table, Typewriter	1

METALWORKING

Introductory			Advanced		
I. Fabricating Machines and Accessories			I. Fabricating Machines and Accessories		
Code	Item	Number	Code	Item	Number
0115	Bar Folder	1	0060	Arbor, Milling machine	2
0260	Bender, Universal	1	0115	Bar Folder	1
			0260	Bender, Universal	1

0450	Brake, Box and pan	1	0415	Boring Bar (set)	2
			0450	Brake, Box and pan	1
0510	Buffer, Pedestal	1	0505	Buffer, Long arm	1
			0840	Chuck, Magnetic	1
			1170	Cutter, Milling machine, End (set)	1
			1175	Cutter, Milling machine, Gear tooth, Involute (set)	1
			1180	Cutter, Milling machine, Helical, Plain	1
			1185	Cutter, Milling machine, Shell and arbor	1
			1190	Cutter, Milling machine, Slitting	1
1225	Cutting-Off Tool, Lathe	6	1225	Cutting-Off Tool, Lathe	6
1330	Drill, Electric, Portable (1/4")	1	1330	Drill, Electric, Portable (1/4")	1
			1335	Drill, Electric, Portable (3/8")	1
			1340	Drill, Electric, Portable (1/2")	1
1430	Electroplating Unit	1	1430	Electroplating Unit	1
1650	Forming Roll, Slip	1	1635	Forge, Gas	1
1680	Furnace, Crucible	1	1650	Forming Roll, Slip	1
1685	Furnace, Heat treating	1	1680	Furnace, Crucible	1
			1685	Furnace, Heat treating	1
			1975	Grinder, Heavy duty pedestal	1
1985	Grinder, Pedestal	1	1985	Grinder, Pedestal	1
			1990	Grinder, Surface	1
			2210	Indicator, Dial test	2
			2275	Jolt Squeezer, Foundry	1
			2385	Knurling Tool, Lathe (coarse)	6
			2390	Knurling Tool, Lathe (fine)	6
			2395	Knurling Tool, Lathe (medium)	6
2415	Lathe, Metalworking (10")	3	2415	Lathe, Metalworking (10")	6
			2420	Lathe, Metalworking (14")	2
			2430	Lathe, Spinning (12")	1
			2550	Mandrel, Expansion (set)	2
			2555	Mandrel Set	1
			2670	Milling Machine, Horizontal	1
			2675	Milling Machine, Universal	1

			2680	Milling Machine, Vertical	1
			2920	Oven, Core	1
			3235	Press, Arbor	1
3250	Press, Drill (15")	2	3250	Press, Drill (15")	1
			3255	Press, Drill (17")	1
			3680	Rotary Machine, Combination	1
			3765	Sand Blaster	1
			3770	Sand Muller	1
			3825	Saw, Band (power), Metal cutting	1
3860	Saw, Hack (power)	1	3860	Saw, Hack (power)	1
			4120	Setting Down Machine	1
			4130	Shaper, Metal	1
			4145	Shear, Ring and circle	1
4150	Shear, Squaring foot	1	4150	Shear, Squaring foot	1
4455	Spray Gun Outfit	1	4455	Spray Gun Outfit	1
			4810	Tension Tester, Core	1
			4835	Tester, Hardness	1
4935	Tool Holder, Lathe (left hand)	6	4935	Tool Holder, Lathe (left hand)	6
4940	Tool Holder, Lathe (right hand)	6	4940	Tool Holder, Lathe (right hand)	6
4945	Tool Holder, Lathe (straight)	6	4945	Tool Holder, Lathe (straight)	6
4950	Torch, Gas	2	4890	Threading Tool, Lathe	2
5185	Welder, Arc	1	4950	Torch, Gas	2
			5185	Welder, Arc	1
5195	Welder, Spot	1	5190	Welder, MIG	1
			5195	Welder, Spot	1
5220	Welding Outfit, Oxyacetylene	1	5205	Welder, TIG	1
			5220	Welding Outfit, Oxyacetylene	1

II. Hand Tools and Equipment

Code	Item	Number
0045	Anvil	1
0050	Apron, Foundry	2
0052	Apron, Rubber	1
0055	Apron, Welding	2
0090	Awl, Scratch	4
0145	Bellows, Molder's	1
0465	Broom, Push	3
0470	Brush, Bench	12
0500	Brush, Wire	6
0515	Bulb, Sponge	1

II. Hand Tools and Equipment

Code	Item	Number
0045	Anvil	1
0050	Apron, Foundry	2
0052	Apron, Rubber	2
0055	Apron, Welding	2
0090	Awl, Scratch	4
0145	Bellows, Molder's	1
0465	Broom, Push	3
0470	Brush, Bench	12
0500	Brush, Wire	6
0515	Bulb, Sponge	1
0640	Caliper, Hermaphrodite	2

0645	Caliper, Inside (6")	6	0645	Caliper, Inside (6")	6
0655	Caliper, Outside (6")	6	0655	Caliper, Outside (6")	6
			0660	Caliper, Outside (8")	2
			0665	Caliper, Vernier	1
0710	Can, Oily waste	1	0710	Can, Oily waste	1
0720	Can, Safety (1 qt.)	2	0720	Can, Safety (1 qt.)	2
0725	Can, Safety (1 gal.)	2	0725	Can, Safety (1 gal.)	2
0770	Chisel, Cape	2	0770	Chisel, Cape	2
0780	Chisel, Cold (set)	1	0780	Chisel, Cold (set)	2
0785	Chisel, Diamond point (set)	1	0785	Chisel, Diamond point (set)	2
0800	Chisel, Round nose (set)	1	0800	Chisel, Round nose (set)	2
0875	Clamp, "C" (4")	4	0875	Clamp, "C" (4")	4
0880	Clamp, "C" (6")	4	0880	Clamp, "C" (6")	4
0885	Clamp, "C" (8")	4	0885	Clamp, "C" (8")	4
			0890	Clamp, "C" (10")	4
0895	Clamp, "C" (12")	2	0895	Clamp, "C" (12")	4
1065	Countersink, Bit (for brace) (set)	1			
1070	Countersink, High speed	1			
1095	Crucible (#4)	2	1095	Crucible (#4)	2
1100	Crucible (#10)	2	1100	Crucible (#10)	3
1110	Crucible Hand Shank (#10)	1	1110	Crucible Hand Shank (#10)	1
1112	Crucible Hand Shank (#4)	1	1112	Crucible Hand Shank (#4)	1
1115	Crucible Lifter	1	1115	Crucible Lifter	1
1120	Crucible Ring Shank	1	1120	Crucible Ring Shank	1
1140	Cutter, Bolt	1	1140	Cutter, Bolt	1
			1205	Cutter, Pipe	1
1215	Cutter, Sprue	1	1215	Cutter, Sprue	1
1245	Die, Dapping	1	1245	Die, Dapping	1
1250	Die, Letter (set)	1	1250	Die, Letter (set)	1
1255	Die, Number (set)	1	1255	Die, Number (set)	1
			1290	Divider, Spring (4")	2
1295	Divider, Spring (6")	6	1295	Divider, Spring (6")	4
			1300	Divider, Spring (8")	2
1320	Dresser, Abrasive wheel	1	1320	Dresser, Abrasive wheel	1
1350	Drill, Hand (1/4")	1	1350	Drill, Hand (1/4")	1
1355	Drill, Hand (3/8")	1	1355	Drill, Hand (3/8")	1
1360	Drill Stand, Fractional	1	1360	Drill Stand, Fractional	1
1365	Drill, Twist (letter set)	1	1365	Drill, Twist (letter set)	1
1370	Drill, Twist (number set)	1	1370	Drill, Twist (number set)	1
1375	Drill, Twist, Straight shank (fractional set)	1	1375	Drill, Twist, Straight shank (fractional set)	1
1380	Drill, Twist, Taper shank (fractional set)	1	1380	Drill, Twist, Taper shank (fractional set)	1
1500	Extractor, Screw (set)	1	1500	Extractor, Screw (set)	1

1540	Files (see specifications for set detail)	
1550	File Card and Brush	6
1610	Flask, Foundry (large)	4
1615	Flask, Foundry (small)	4
1725	Gauge, Center	3
1800	Gauge, Screw pitch	1
1830	Gauge, Thickness ("feeler")	1
1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1
1880	Gloves, Asbestos (pair)	2
1885	Gloves, Leather (pair)	4
1892	Gloves, Thick rubber (pair)	2
1900	Goggles (spectacles), Clear observation	24
1905	Goggles, Gas welding	3
2000	Groover, Hand (set)	2
2025	Hammer, Ball peen (8 oz.)	2
2030	Hammer, Ball peen (12 oz.)	4
2035	Hammer, Ball peen (16 oz.)	2
2090	Hammer, Engineer's (40 oz.)	2
2095	Hammer, Engineer's (48 oz.)	1
2115	Hammer, Riveting, Machinist's (9 oz.)	2
2130	Hammer, Soft face (4 oz.)	2
2135	Hammer, Soft face (8 oz.)	2
2145	Helmet, Welding (arc) (head type)	2

1540	Files (see specifications for set detail)	
1550	File Card and Brush	6
1610	Flask, Foundry (large)	4
1615	Flask, Foundry (small)	4
1725	Gauge, Center	6
1755	Gauge, Drill point	1
1785	Gauge, Micrometer, Depth	1
1795	Gauge, Radius and fillet	1
1800	Gauge, Screw pitch	1
1805	Gauge, Small hole	1
1820	Gauge, Surface	1
1825	Gauge, Telescopic	1
1830	Gauge, Thickness ("feeler")	1
1850	Gauge, Vernier height	1
1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1
1880	Gloves, Asbestos (pair)	2
1885	Gloves, Leather (pair)	6
1892	Gloves, Thick rubber (pair)	2
1900	Goggles (spectacles), Clear observation	24
1905	Goggles, Gas welding	3
2000	Groover, Hand (set)	2
2025	Hammer, Ball peen (8 oz.)	2
2030	Hammer, Ball peen (12 oz.)	4
2035	Hammer, Ball peen (16 oz.)	2
2040	Hammer, Ball peen (30 oz.)	2
2045	Hammer, Ball peen (32 oz.)	2
2065	Hammer, Chipping	2
2090	Hammer, Engineer's (40 oz.)	2
2095	Hammer, Engineer's (48 oz.)	1
2115	Hammer, Riveting, Machinist's (9 oz.)	2
2130	Hammer, Soft face (4 oz.)	2
2135	Hammer, Soft face (8 oz.)	2
2145	Helmet, Welding (arc) (head type)	2

2450	Leggings, Molder's (pair)	2	2450	Leggings, Molder's (pair)	2
2535	Mallet, Hardwood	4	2535	Mallet, Hardwood	4
2540	Mallet, Rawhide	4	2540	Mallet, Rawhide	2
2545	Mallet, Rubber	2	2545	Mallet, Rubber	2
2620	Micrometer, Inside (set)	1	2620	Micrometer, Inside (set)	1
2625	Micrometer, Outside (1")	4	2625	Micrometer, Outside (1")	6
2630	Micrometer, Outside (2")	2	2630	Micrometer, Outside (2")	2
2635	Micrometer, Outside (3")	1	2635	Micrometer, Outside (3")	1
			2650	Micrometer, Outside (screw thread)	1
			2655	Micrometer, Outside (screw thread)	1
2710	Mold, Ingot	1	2710	Mold, Ingot	1
2835	Nipper, End cutting	1	2835	Nipper, End cutting	1
2865	Oiler, Bench	12	2865	Oiler, Bench	12
2890	Oilstone, Combination, India	2	2890	Oilstone, Combination, India	2
2932	Pan, Dust	1	2932	Pan, Dust	1
			2945	Parallels, Adjustable (set)	1
2980	Pencil Sharpener, Standard	1	2980	Pencil Sharpener, Standard	1
			3055	Plate, Angle	2
3085	Pliers, Combination (6")	6	3060	Plate, Surface	1
3090	Pliers, Combination (8")	4	3085	Pliers, Combination (6")	6
3100	Pliers, Diagonal cutting	2	3090	Pliers, Combination (8")	4
3135	Pliers, Needle nose	2	3100	Pliers, Diagonal cutting	2
3155	Pliers, Straight nose	2	3135	Pliers, Needle nose	2
3170	Pliers, Vise-grip wrench	2	3155	Pliers, Straight nose	2
3455	Punch, Center (set)	4	3170	Pliers, Vise-grip wrench	2
3475	Punch, Drive (set)	1	3455	Punch, Center (set)	6
3485	Punch, Hollow (set)	1	3475	Punch, Drive (set)	1
3575	Rammer, Hardwood	2	3485	Punch, Hollow (set)	1
3580	Reamer, Center (set)	1	3575	Rammer, Hardwood	2
			3580	Reamer, Center (set)	1
3600	Reamer, Pipe	1	3595	Reamer, Expansion (set)	1
3660	Riddle, Foundry	2	3600	Reamer, Pipe	1
3665	Rivet Set (set)	4	3660	Riddle, Foundry	2
3690	Rule, Circumference (36")	2	3665	Rivet Set (set)	4
3710	Rule, Flexible, Steel tape (12')	2	3690	Rule, Circumference (36")	2
			3710	Rule, Flexible, Steel tape (12')	2
3745	Rule, Steel (6")	6	3725	Rule, Hook	4
3750	Rule, Steel (12")	12	3740	Rule, Short (set)	1
3755	Rule, Steel (24")	2	3745	Rule, Steel (6")	8
3850	Saw, Hack (hand)	6	3750	Rule, Steel (12")	12
			3755	Rule, Steel (24")	2
			3850	Saw, Hack (hand)	6

3875	Saw, Jeweler's (4")	2	3875	Saw, Jeweler's (4")	2
3880	Saw, Jeweler's (6")	4	3880	Saw, Jeweler's (6")	4
3965	Scissors	1	3965	Scissors	1
4045	Screwdriver, Offset, Straight slot (set)	1	4035	Screwdriver, Offset, Phillips (set)	1
4050	Screwdriver, Phillips (set)	1	4045	Screwdriver, Offset, Straight slot (set)	1
4070	Screwdriver, Standard bit (round blade) (set)	2	4050	Screwdriver, Phillips (set)	1
4105	Scriber	6	4070	Screwdriver, Standard bit (round blade) (set)	2
4110	Seamer, Handy	2	4105	Scriber	6
4165	Shield, Face	12	4110	Seamer, Handy	2
4170	Shovel, Square point	1	4165	Shield, Face	12
4222	Sleeves, Molder's	1	4170	Shovel, Square point	1
4225	Slick and Oval (1")	1	4222	Sleeves, Molder's	1
4230	Slick and Oval (1 1/4")	1	4225	Slick and Oval (1")	1
4250	Snip, Aviation (left)	2	4230	Slick and Oval (1 1/4")	1
4255	Snip, Aviation (right)	2	4250	Snip, Aviation (left)	2
4260	Snip, Aviation (com- bination and straight)	2	4255	Snip, Aviation (right)	2
4265	Snips, Hawksbill	1	4260	Snip, Aviation (com- bination and straight)	2
4275	Snips, Tinner's, Straight (#8)	4	4265	Snips, Hawksbill	1
4280	Snips, Tinner's, Straight (#10)	2	4275	Snips, Tinner's, Straight (#8)	4
4295	Soldering Copper, Electric (60W)	1	4280	Snips, Tinner's, Straight (#10)	2
4300	Soldering Copper, Electric (200W)	1	4295	Soldering Copper, Electric (60W)	1
4315	Soldering Copper (pair) (1/2 lb.)	4	4300	Soldering Copper, Electric (200W)	1
4320	Soldering Copper (pair) (1 lb.)	2	4305	Soldering Copper, Electric (300W)	1
4325	Soldering Copper (pair) (1 1/2 lb.)	1	4315	Soldering Copper (pair) (1/2 lb.)	2
4390	Sparklighters	6	4320	Soldering Copper (pair) (1 lb.)	2
4480	Square, Combination	6	4325	Soldering Copper (pair) (1 1/2 lb.)	1
4485	Square, Combination set (with protractor and center head)	1	4390	Sparklighters	6
4510	Stake, Beakhorn	1	4480	Square, Combination	6
4520	Stake, Blowhorn	1	4485	Square, Combination set (with protractor and center head)	1
			4510	Stake, Beakhorn	1
			4515	Stake, Bevel edge square	1
			4520	Stake, Blowhorn	1

4530	Stake, Candle mold	1	4525	Stake, Bottom	1
			4530	Stake, Candle mold	1
			4535	Stake, Conductor	1
			4545	Stake, Double seaming	1
			4550	Stake, Grooving	1
4555	Stake, Hatchet	1	4555	Stake, Hatchet	1
4560	Stake, Hollow mandrel	1	4560	Stake, Hollow mandrel	1
			4565	Stake, Needle case	1
			4570	Stake, Round head	1
4755	Tap and Die, Machine screw (set)	1	4755	Tap and Die, Machine screw (set)	1
4760	Tap and Die, NC (U.S. standard) (set)	1	4760	Tap and Die, NC (U.S. standard) (set)	1
4765	Tap and Die, NF (S.A.E.) (set)	1	4765	Tap and Die, NF (S.A.E.) (set)	1
4770	Tap and Die, Pipe (set)	1	4770	Tap and Die, Pipe (set)	1
4915	Tongs, Blacksmith, Curved lip	2	4915	Tongs, Blacksmith, Curved lip	2
4925	Tongs, Pick-up	2	4925	Tongs, Pick-up	2
4965	Trammel Points	1	4965	Trammel Points	1
			5045	Trowel, Foundry	1
5065	Truck, Welding cylinder	1	5065	Truck, Welding cylinder	1
5120	V Block and Clamps (set)	1	5120	V Block and Clamps (set)	2
5130	Vise, Angle, Drill	1	5130	Vise, Angle, Drill	2
5135	Vise, Bench, Drill	2	5135	Vise, Bench, Drill	2
5140	Vise, Machinist's bench	12	5140	Vise, Machinist's bench	12
5150	Vise, Pin (set)	1	5150	Vise, Pin (set)	1
5152	Vise, Pipe	1	5152	Vise, Pipe	1
5255	Wrench, Adjustable end (6")	2	5255	Wrench, Adjustable end (6")	2
5260	Wrench, Adjustable end (8")	2	5260	Wrench, Adjustable end (8")	2
			5265	Wrench, Adjustable end (10")	2
			5270	Wrench, Adjustable end (12")	2
5280	Wrench, Allen key (hex) (set)	1	5280	Wrench, Allen key (hex) (set)	1
5285	Wrench, Box (set)	1	5285	Wrench, Box (set)	1
5335	Wrench, Open end (set)	1	5335	Wrench, Open end (set)	1
5340	Wrench, Pipe (10")	1	5340	Wrench, Pipe (10")	1
			5345	Wrench, Pipe (14")	1
			5350	Wrench, Pipe (18")	1
5360	Wrench, Socket (3/8" drive) (set)	1	5360	Wrench, Socket (3/8" drive) (set)	1
5365	Wrench, Socket (1/2" drive) (set)	1	5365	Wrench, Socket (1/2" drive) (set)	1

III. General Furnishings			III. General Furnishings		
Code	Item	Number	Code	Item	Number
0150	Bench, Arc welding	1	0150	Bench, Arc welding	2
0180	Bench, Gas welding	1	0180	Bench, Gas welding	2
0195	Bench, Machine	1	0195	Bench, Machine	1
0205	Bench, Metalworking (2 place)	2	0205	Bench, Metalworking (2 place)	2
0210	Bench, Metalworking (4 place)	4	0210	Bench, Metalworking (4 place)	4
0212	Bench, Molding	1	0212	Bench, Molding	1
0225	Bench, Sheet metal	1	0225	Bench, Sheet metal	1
0230	Bench, Soldering	2	0230	Bench, Soldering	1
0235	Bench, Spot welding	1	0235	Bench, Spot welding	1
			0240	Bench, TIG welding	1
0405	Bookcase	1	0405	Bookcase	1
0540	Cabinet, Filing	1	0540	Cabinet, Filing	1
0542	Cabinet, Finishing (storage)	1	0542	Cabinet, Finishing (storage)	1
0615	Cabinet, Small parts	1	0615	Cabinet, Small parts	1
0620	Cabinet, Storage	4	0620	Cabinet, Storage	6
0625	Cabinet, Tool storage	1	0625	Cabinet, Tool storage	1
0755	Chair, Teacher's	1	0755	Chair, Teacher's	1
1025	Compressor, Air	1	1025	Compressor, Air	1
1235	Desk, Teacher's	1	1235	Desk, Teacher's	1
1592	Fire Blanket	1	1592	Fire Blanket	1
1593	Fire Extinguisher	3	1593	Fire Extinguisher	3
1600	First Aid Kit	1	1600	First Aid Kit	1
1675	Furnace, Bench	2	1675	Furnace, Bench	2
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1	3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1	3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1	3350	Projector, Overhead	1
3555	Rack, Metal storage	1	3555	Rack, Metal storage	1
4010	Screen, Projection	1	4010	Screen, Projection	1
			4445	Spray Booth, Dry	1
4615	Stool, Student's adjustable	24	4615	Stool, Student's adjustable	24
4670	Table, Drafting	1	4670	Table, Drafting	1
4690	Table, Overhead projector	1	4690	Table, Overhead projector	1

PLASTICS

Introductory			Advanced		
I. Basic Plastics Equipment			I. Basic Plastics Equipment		
Code	Item	Number	Code	Item	Number
0070	Autoclave	1	0070	Autoclave	1
1510	Extruder, Medium	1	1505	Extruder, Large	1
1515	Extruder, Small	1	1510	Extruder, Medium	1
			1515	Extruder, Small	1
			2715	Molder, Blow	1
			2720	Molder, Rotational	1
2725	Molding Press, Compression (large)	1	2725	Molding Press, Compression (large)	1
2730	Molding Press, Compression (medium)	1	2730	Molding Press, Compression (medium)	1
2735	Molding Press, Compression (small)	1			
			2740	Molding Press, Injection (large)	1
2745	Holding Press, Injection (medium)	1	2745	Holding Press, Injection (medium)	1
2750	Molding Press, Injection (small)	1			
			2755	Molding Press, Transfer (large)	1
			2760	Molding Press, Transfer (medium)	1
2915	Oven	1	2915	Oven	1
			3230	Pre-Expander, Polystyrene	1
4450	Spray Gun (all- materials)	1	3975	Scrape Granulator	1
			4450	Spray Gun (all- materials)	1
4870	Thermoforming Press, Vacuum (large)	1	4465	Spray Unit, Reinforced plastics	1
			4870	Thermoforming Press, Vacuum (large)	1
4880	Thermoforming Press, Vacuum (small)	1	4875	Thermoforming Press, Vacuum (medium)	1
			4880	Thermoforming Press, Vacuum (small)	1
II. Auxiliary Plastics Equipment			II. Auxiliary Plastics Equipment		
Code	Item	Number	Code	Item	Number
0510	Buffer, Pedestal	2	0510	Buffer, Pedestal	2
3945	Scale, Laboratory	1	3945	Scale, Laboratory	1
4655	Strip heater	1	4655	Strip heater	1

			4830	Tester, Guided bend	1
			4835	Tester, Hardness	1
			4860	Testing Machine, Tensile	1
4900	Timer, Interval	1	4900	Timer, Interval	1
5230	Welding Unit, Plastics	1	5230	Welding Unit, Plastics	1

III. Plaster Casting Equipment

Code	Item	Number
1060	Container, Plaster	1
2700	Mixing Bowls (set)	3
3970	Scoop, Plaster	1
4005	Screening Wheel	1

III. Plaster Casting Equipment

Code	Item	Number
1060	Container, Plaster	1
2700	Mixing Bowls (set)	3
3970	Scoop, Plaster	1
4005	Screening Wheel	1

IV. Finishing Equipment

Code	Item	Number
4445	Spray Booth, Dry	1
4455	Spray Gun Outfit	1

IV. Finishing Equipment

Code	Item	Number
4445	Spray Booth, Dry	1
4455	Spray Gun Outfit	1

V. Woodworking Equipment

Code	Item	Number
1320	Dresser, Abrasive wheel	1
1330	Drill, Electric, Portable (1/4")	1
1340	Drill, Electric, Portable (1/2")	1
1965	Grinder, Edge tool (bench)	1
2260	Jointer (6")	1
2430	Lathe, Spinning (12")	1
2435	Lathe, Wood turning	1
3250	Press, Drill (15")	1
3675	Router, Portable, Electric	1
3780	Sander, Belt, Portable, Electric	1
3790	Sander, Disc	1
3795	Sander, Finishing, Portable, Electric	1
3810	Sander, Spindle	1
3830	Saw, Band, Wood-cutting	1
3835	Saw, Circular, Power	1
3885	Saw, Jig (scroll)	1
3900	Saw, Sabre (bayonet)	1

V. Woodworking Equipment

Code	Item	Number
1320	Dresser, Abrasive wheel	1
1330	Drill, Electric, Portable (1/4")	1
1340	Drill, Electric, Portable (1/2")	1
1965	Grinder, Edge tool (bench)	1
2260	Jointer (6")	1
2430	Lathe, Spinning (12")	1
2435	Lathe, Wood turning	1
3250	Press, Drill (15")	1
3675	Router, Portable, Electric	1
3780	Sander, Belt, Portable, Electric	1
3790	Sander, Disc	1
3795	Sander, Finishing, Portable, Electric	1
3810	Sander, Spindle	1
3830	Saw, Band, Wood-cutting	1
3835	Saw, Circular, Power	1
3885	Saw, Jig (scroll)	1
3900	Saw, Sabre (bayonet)	1

VI. Metalworking Equipment

Code	Item	Number
0260	Bender, Universal	1
0450	Brake, Box and pan	1
1650	Forming Roll, Slip	1
1955	Grinder, Belt	1
4150	Shear, Squaring foot	1
5195	Welder, Spot	1

VI. Metalworking Equipment

Code	Item	Number
0260	Bender, Universal	1
0450	Brake, Box and pan	1
1615	Flask, Foundry (small)	1
1650	Forming Roll, Slip	1
1680	Furnace, Crucible	1
1955	Grinder, Belt	1
2415	Lathe, Metalworking (10')	1
2940	Pantograph, Metalworking	1
3860	Saw, Hack, Power	1
4150	Shear, Squaring foot	1
4155	Shearing and Forming Machine, Universal	1
4865	Testing Machine, Universal	1
5185	Welder, Arc	1
5195	Welder, Spot	1
5220	Welding Outfit, Oxyacetylene	1

VII. Hand Tools

Code	Item	Number
0085	Awl, Brad	2
0285	Bit, Auger (set)	1
0430	Brace, Ratchet	1
0645	Caliper, Inside (6")	1
0655	Caliper, Outside (6")	1
0765	Chisel, Butt (set)	2
0775	Chisel, Carving (set)	2
0780	Chisel, Cold (set)	2
0805	Chisel, Socket firmer (set)	1
0835	Chisel, Wood turning (set)	1
0845	Circle Cutter	1
0850	Clamp, Bar (36")	8
0855	Clamp, Bar (48")	4
0880	Clamp, "C" (6")	12
0885	Clamp, "C" (8")	6
0945	Clamp, Spring (#3)	12
1065	Countersink, Bit (for brace) (set)	1
1295	Divider, Spring (6")	1
1350	Drill, Hand (1/4")	1
1355	Drill, Hand (3/8")	1
1360	Drill Stand, Fractional	1

VII. Hand Tools

Code	Item	Number
0085	Awl, Brad	2
0285	Bit, Auger (set)	1
0430	Brace, Ratchet	1
0645	Caliper, inside (6")	1
0655	Caliper, Outside (6")	1
0765	Chisel, Butt (set)	2
0775	Chisel, Carving (set)	2
0780	Chisel, Cold (set)	2
0805	Chisel, Socket firmer (set)	1
0835	Chisel, Wood turning (set)	1
0845	Circle Cutter	1
0850	Clamp, Bar (36")	8
0855	Clamp, Bar (48")	4
0880	Clamp, "C" (6")	12
0885	Clamp, "C" (8")	6
0945	Clamp, Spring (#3)	12
1065	Countersink, Bit (for brace) (set)	1
1295	Divider, Spring (6")	1
1350	Drill, Hand (1/4")	1
1355	Drill, Hand (3/8")	1
1360	Drill Stand, Fractional	1

1370	Drill, Twist (number set)	1	1370	Drill, Twist (number set)	1
1375	Drill, Twist, Straight shank (fractional set)	1	1375	Drill, Twist, Straight shank (fractional set)	1
1500	Extractor, Screw (set)	1	1500	Extractor, Screw (set)	1
1540	Files (see specifications for set)		1540	Files (see specifications for set)	
1550	File Card and Brush	6	1550	File Card and Brush	6
1570	File, Needle (set)	1	1570	File, Needle (set)	1
1710	Gauge, Auger bit	1	1710	Gauge, Auger bit	1
1775	Gauge, Marking	1	1775	Gauge, Marking	1
1855	Gauge, Wire and sheet metal (American)	1	1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1	1860	Gauge, Wire and sheet metal (U.S.S.)	1
1900	Goggles (spectacles), Clear observation	20	1900	Goggles (spectacles), Clear observation	20
1915	Graduate Cylinder (100cc)	2	1915	Graduate Cylinder (100cc)	2
1920	Graduate Cylinder (500cc)	2	1920	Graduate Cylinder (500cc)	2
2030	Hammer, Ball peen (12 oz.)	1	2030	Hammer, Ball peen (12 oz.)	1
2130	Hammer, Soft face	2	2130	Hammer, Soft face	2
2085	Hammer, Claw (16 oz.)	2	2085	Hammer, Claw (16 oz.)	2
			2140	Helmet, Welding (arc) (hand type)	2
			2145	Helmet, Welding (head type)	1
2540	Mallet, Rawhide	2	2540	Mallet, Rawhide	2
2625	Micrometer, Outside (1")	1	2625	Micrometer, Outside (1")	1
2630	Micrometer, Outside (2")	1	2630	Micrometer, Outside (2")	1
2800	Nail Set (1/16" tip)	6	2800	Nail Set (1/16" tip)	6
2865	Oiler, Bench	6	2865	Oiler, Bench	6
2890	Oilstone, Combination, India	2	2890	Oilstone, Combination, India	2
2895	Oilstone, Combination, Silicon carbide	2	2895	Oilstone, Combination, Silicon carbide	2
			2995	Pipet Control, Microsyringe	1
3010	Plane, Jack	2	3010	Plane, Jack	2
3085	Pliers, Combination (6")	1	3085	Pliers, Combination (6")	1
3090	Pliers, Combination (8")	1	3090	Pliers, Combination (8")	1
3100	Pliers, Diagonal cutting	1	3100	Pliers, Diagonal cutting	1
3110	Pliers, End cutting	1	3110	Pliers, End cutting	1
3155	Pliers, Straight nose	1	3155	Pliers, Straight nose	1

3160	Pliers, Tongue	1	3160	Pliers, Tongue	1
3170	Pliers, Vise-grip wrench	1	3170	Pliers, Vise-grip wrench	1
3455	Punch, Center (set)	3	3455	Punch, Center (set)	3
3480	Punch, Hand (set)	1	3480	Punch, Hand (set)	1
3500	Punch, Pin (set)	1	3500	Punch, Pin (set)	1
3750	Rule, Steel (12")	6	3750	Rule, Steel (12")	6
3755	Rule, Steel (24")	6	3755	Rule, Steel (24")	6
3815	Sanding Drums (set)	1	3815	Sanding Drums (set)	1
3820	Saw, Back	2	3820	Saw, Back	2
3830	Saw, Coping	2	3830	Saw, Coping	2
3850	Saw, Hack (hand)	2	3850	Saw, Hack (hand)	2
3865	Saw, Hand, Crosscut	2	3865	Saw, Hand, Crosscut	2
3965	Scissors	1	3965	Scissors	1
3980	Scraper, Cabinet	2	3980	Scraper, Cabinet	2
3995	Scraper, Hand	6	3995	Scraper, Hand	6
4070	Screwdriver, Standard bit (round blade) (set)	6	4070	Screwdriver, Standard bit (round blade) (set)	6
4165	Shield, Face	6	4165	Shield, Face	6
4275	Snips, Tinner's, Straight (#8)	2	4275	Snips, Tinner's, Straight (#8)	2
4480	Square, Combination	6	4480	Square, Combination	6
4485	Square, Combination set (with protractor and center head)	1	4485	Square, Combination set (with protractor and center head)	1
4490	Square, Steel framing	2	4490	Square, Steel framing	2
4760	Tap and Die, NC (U.S. standard) (set)	1	4760	Tap and Die, NC (U.S. standard) (set)	1
4765	Tap and Die, NF (S.A.E.) (set)	1	4765	Tap and Die, NF (S.A.E.) (set)	1
4775	T Bevel, Sliding	1	4775	T Bevel, Sliding	1
5120	V Block and Clamps (set)	1	5120	V Block and Clamps (set)	1
5255	Wrench, Adjustable end (6")	1	5255	Wrench, Adjustable end (6")	1
5260	Wrench, Adjustable end (8")	1	5260	Wrench, Adjustable end (8")	1
5265	Wrench, Adjustable end (10")	1	5265	Wrench, Adjustable end (10")	1
5270	Wrench, Adjustable end (12")	1	5270	Wrench, Adjustable end (12")	1
5280	Wrench, Allen key (hex) (set)	1	5280	Wrench, Allen key (hex) (set)	1
5290	Wrench, Combination box and open (set)	1	5290	Wrench, Combination box and open (set)	1
5360	Wrench, Socket (3/8" drive) (set)	1	5360	Wrench, Socket (3/8" drive) (set)	1

VIII. General Furnishings			VIII. General Furnishings		
Code	Item	Number	Code	Item	Number
0195	Bench, Machine	2	0150	Bench, Arc welding	1
0210	Bench, Metalworking (4 place)	2	0180	Bench, Gas welding	1
0212	Bench, Molding	1	0195	Bench, Machine	2
0215	Bench, Plaster	1	0210	Bench, Metalworking (4 place)	2
0255	Bench, Woodworking (4 place)	4	0212	Bench, Molding	1
0405	Bookcase	1	0215	Bench, Plaster	1
0465	Broom, Push	3	0255	Bench, Woodworking (4 place)	6
0470	Brush, Bench	12	0405	Bookcase	1
0540	Cabinet, Filing	1	0465	Broom, Push	3
0542	Cabinet, Finishing supply	2	0470	Brush, Bench	12
0590	Cabinet, Parts storage	1	0540	Cabinet, Filing	1
0610	Cabinet, Sheet plastics storage	1	0542	Cabinet, Finishing supply	2
0620	Cabinet, Storage	1	0590	Cabinet, Parts storage	1
0625	Cabinet, Tool storage	1	0610	Cabinet, Sheet plastics storage	1
0710	Can, Oily waste	2	0620	Cabinet, Storage	1
0720	Can, Safety (1 qt.)	6	0625	Cabinet, Tool storage	1
0725	Can, Safety (1 gal.)	6	0710	Can, Oily waste	2
0755	Chair, Teacher's	1	0720	Can, Safety (1 qt.)	6
1235	Desk, Teacher's	1	0725	Can, Safety (1 gal.)	6
1592	Fire Blanket	1	0755	Chair, Teacher's	1
1593	Fire Extinguisher	3	1235	Desk, Teacher's	1
1600	First Aid Kit	1	1592	Fire Blanket	1
2932	Pan, Dust	1	1593	Fire Extinguisher	3
2980	Pencil Sharpener, Standard	1	1600	First Aid Kit	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1	2660	Microscope	1
3345	Projector, Motion picture, Sound	1	2932	Pan, Dust	1
3350	Projector, Overhead	1	2980	Pencil Sharpener, Standard	1
3545	Rack, Lumber	1	3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3555	Rack, Metal storage	1	3345	Projector, Motion picture, Sound	1
4010	Screen, Projection	1	3350	Projector, Overhead	1
4690	Table, Overhead projector	1	3545	Rack, Lumber	1
			3555	Rack, Metal storage	1
			4010	Screen, Projection	1
			4690	Table, Overhead projector	1
			5065	Truck, Welding cylinder	

WOODWORKING

Introductory			Advanced		
I. Fabricating Machines			I. Fabricating Machines		
Code	Item	Number	Code	Item	Number
1330	Drill, Electric, Portable (1/4")	1	1330	Drill, Electric, Portable (1/4")	1
			1335	Drill, Electric, Portable (3/8")	1
1965	Grinder, Edge tool (bench)	1	1965	Grinder, Edge tool (bench)	1
1980	Grinder, Oil tool	1	1980	Grinder, Oil tool	1
2260	Jointer (6")	1	2260	Jointer (6")	1
			2265	Jointer (8")	1
2435	Lathe, Wood turning	3	2435	Lathe, Wood turning	3
			2780	Mortiser, Hollow chisel	1
			3025	Plane, Portable, Electric	1
3250	Press, Drill (15")	1	3250	Press, Drill (15")	1
3675	Router, Portable, Electric	1	3675	Router, Portable, Electric	1
3780	Sander, Belt, Portable, Electric	1	3780	Sander, Belt, Portable, Electric	1
3785	Sander, Combination belt and disc	1	3785	Sander, Combination belt and disc	1
3795	Sander, Finishing, Portable, Electric	1	3795	Sander, Finishing, Portable, Electric	1
			3805	Sander, Handblock stroke	1
3810	Sander, Spindle	1	3810	Sander, Spindle	1
3830	Saw, Band, Woodcutting	1	3830	Saw, Band, Woodcutting	1
3835	Saw, Circular, Power	1	3835	Saw, Circular, Power	1
3885	Saw, Jig (scroll)	1	3885	Saw, Jig (scroll)	1
			3895	Saw, Radial-arm, Power	1
			3900	Saw, Sabre (bayonet)	1
			4135	Shaper, Spindle (floor model)	1
			4660	Surfacer (single surface planer)	1
II. Hand Tools and Equipment			II. Hand Tools and Equipment		
Code	Item	Number	Code	Item	Number
0085	Awl, Brad	2	0085	Awl, Brad	2
0090	Awl, Scratch	4	0090	Awl, Scratch	4
0125	Bar, Wrecking	1	0125	Bar, Wrecking	1
0145	Bellows, Molder's	4	0145	Bellows, Molder's	4

0285	Bit, Auger (set)	2	0285	Bit, Auger (set)	2
0290	Bit, Combination drill and countersink (set)	1	0290	Bit, Combination drill and countersink (set)	1
0295	Bit, Combination drill and counterbore (set)	1	0295	Bit, Combination drill and counterbore (set)	1
0305	Bit, Expansive	1	0300	Bit, Electrician's	1
0310	Bit, Extension	1	0305	Bit, Expansive	1
0315	Bit, Forstner (brace set)	1	0310	Bit, Extension	1
0320	Bit, Forstner (machine set)	1	0315	Bit, Forstner (brace set)	1
0325	Bit, Multi-spur (set)	1	0320	Bit, Forstner (machine set)	1
0330	Bit, Plug cutter (set)	1	0325	Bit, Multi-spur (set)	1
0335	Bit, Twist, Car	1	0330	Bit, Plug cutter (set)	1
0365	Block, Sanding	24	0345	Bit, Twist, Car	1
0430	Brace, Ratchet	5	0365	Block, Sanding	24
0435	Bracket, Saw horse (pair)	2	0430	Brace, Ratchet	5
0465	Broom, Push	6	0435	Bracket, Saw horse (pair)	2
0470	Brush, Bench	24	0465	Broom, Push	6
0520	Burnisher	1	0470	Brush, Bench	24
0710	Can, Oily waste	1	0520	Burnisher	1
0720	Can, Safety (1 qt.)	4	0710	Can, Oily waste	1
0725	Can, Safety (1 gal.)	3	0720	Can, Safety (1 qt.)	4
0765	Chisel, Butt (set)	12	0725	Can, Safety (1 gal.)	3
0775	Chisel, Carving (set)	1	0765	Chisel, Butt (set)	12
0790	Chisel, Gouge, Inside (set)	3	0775	Chisel, Carving (set)	4
0795	Chisel, Gouge, Outside (set)	3	0790	Chisel, Gouge, Inside (set)	3
0805	Chisel, Socket firmer (set)	4	0795	Chisel, Gouge, Outside (set)	3
0835	Chisel, Wood turning (set)	3	0805	Chisel, Socket firmer (set)	4
0845	Circle Cutter	1	0835	Chisel, Wood turning (set)	3
0850	Clamp, Bar (36")	6	0845	Circle Cutter	1
0855	Clamp, Bar (48")	6	0850	Clamp, Bar (36")	6
0870	Clamp, "C" (3")	4	0855	Clamp, Bar (48")	6
0875	Clamp, "C" (4")	4	0870	Clamp, "C" (3")	4
0880	Clamp, "C" (6")	4	0875	Clamp, "C" (4")	4
0885	Clamp, "C" (8")	4	0880	Clamp, "C" (6")	4
0900	Clamp, Corner	4	0885	Clamp, "C" (8")	4
0905	Clamp, Fixture (set)	6	0900	Clamp, Corner	4
0910	Clamp, Handscrew (#3/o)	6	0905	Clamp, Fixture (set)	6
0915	Clamp, Handscrew (#0)	6	0910	Clamp, Handscrew (#3/o)	6
0920	Clamp, Handscrew (#1)	12	0915	Clamp, Handscrew (#0)	6
0925	Clamp, Handscrew (#2)	12	0920	Clamp, Handscrew (#1)	12
			0925	Clamp, Handscrew (#2)	12

0930	Clamp, Handscrew (#3)	6	0930	Clamp, Handscrew (#3)	6
0935	Clamp, Mitre frame	1	0935	Clamp, Mitre frame	1
0995	Compass, Pencil	3	0995	Compass, Pencil	3
1065	Countersink Bit (for brace) (set)	2	1065	Countersink Bit (for brace) (set)	2
1070	Countersink, High Speed	2	1070	Countersink, High Speed	2
1150	Cutter, Glass	1	1150	Cutter, Glass	1
1250	Die, Letter (set)	1	1250	Die, Letter (set)	1
1255	Die, Number (set)	1	1255	Die, Number (set)	1
1305	Divider, Wing	2	1305	Divider, Wing	2
1317	Dowel Centers (pairs) (set)	1	1317	Dowel Centers (pairs) (set)	1
1320	Dresser, Abrasive wheel	1	1320	Dresser, Abrasive wheel	1
1350	Drill, Hand (1/4")	2	1350	Drill, Hand (1/4")	4
1355	Drill, Hand (3/8")	1	1355	Drill, Hand (3/8")	1
1360	Drill Stand, Fractional	1	1360	Drill Stand, Fractional	1
1375	Drill, Twist, Straight shank (fractional set)	1	1375	Drill, Twist, Straight shank (fractional set)	1
1540	Files (see specifications for set detail)	1	1540	Files (see specifications for set detail)	1
1545	File, Auger bit	3	1545	File, Auger bit	3
1550	File Card and Brush	6	1550	File Card and Brush	6
1665	Funnel	2	1665	Funnel	2
1710	Gauge, Auger bit	1	1710	Gauge, Auger bit	1
1745	Gauge, Drill, Fractions	1	1745	Gauge, Drill, Fractions	1
1775	Gauge, Marking	6	1775	Gauge, Marking	6
1780	Gauge, Marking (double bar)	2	1780	Gauge, Marking (double bar)	2
1800	Gauge, Screw pitch	1	1800	Gauge, Screw pitch	1
1855	Gauge, Wire and sheet metal (American)	1	1855	Gauge, Wire and sheet metal (American)	1
1860	Gauge, Wire and sheet metal (U.S.S.)	1	1860	Gauge, Wire and sheet metal (U.S.S.)	1
1885	Gloves, Leather (pair)	4	1885	Gloves, Leather (pair)	4
1900	Goggles, Clear observation	24	1900	Goggles, Clear observation	24
1930	Grease Gun	1	1930	Grease Gun	1
2070	Hammer, Claw (7 oz.)	3	2070	Hammer, Claw (7 oz.)	3
2080	Hammer, Claw (13 oz.)	6	2080	Hammer, Claw (13 oz.)	6
2085	Hammer, Claw (16 oz.)	6	2085	Hammer, Claw (16 oz.)	6
2107	Hammer, Magnetic	2	2107	Hammer, Magnetic	2
2175	Hose, Air	1	2175	Hose, Air	1
2245	Jig, Dowelling	2	2245	Jig, Dowelling	2
2360	Knife, Putty	3	2360	Knife, Putty	3
2370	Knife, Sloyd	6	2370	Knife, Sloyd	6
2465	Level	1	2465	Level	1
2535	Mallet, Hardwood	4	2535	Mallet, Hardwood	4

2540	Mallet, Rawhide	4
2690	Mitre Box	1
2800	Nail Set (1/16" tip)	4
2805	Nail Set (3/32" tip)	4
2835	Nipper, End cutting	1
2845	Nozzle, Blow gun (air line)	1
2865	Oiler, Bench	6
2870	Oiler, Pump	1
2885	Oilstone, Carving tool slips (set)	1
2890	Oilstone, Combination, India	1
2900	Oilstone, Gouge slip	1
2905	Oilstone, Slip	1
2932	Pan, Dust	1
3000	Plane, Block	3
3005	Plane Iron, Double	24
3010	Plane, Jack	18
3015	Plane, Jointer	2
3030	Plane, Rabbet	4
3035	Plane, Router	4
3040	Plane, Smoothing	6
3085	Pliers, Combination (6")	2
3170	Pliers, Vise-grip wrench	2
3360	Protractor, Machinist's bevel	2
3455	Punch, Center (set)	3
3695	Rule, Flexible, Steel tape (6')	4
3705	Rule, Flexible, Steel tape (10')	4
3715	Rule, Flexible, Steel tape (25')	1
3725	Rule, Flexible, Steel tape (100')	1
3750	Rule, Steel (12")	18
3755	Rule, Steel (24")	6
3760	Rule, Steel (36")	3
3815	Sanding Drums (set)	1
3820	Saw, Back	6
3845	Saw, Coping	12
3850	Saw, Hack (hand)	1
3865	Saw, Hand, Crosscut	4
3870	Saw, Hand, Rip	4
3887	Saw, Keyhole	1

2540	Mallet, Rawhide	4
2690	Mitre Box	1
2800	Nail Set (1/16" tip)	4
2805	Nail Set (3/32" tip)	4
2835	Nipper, End cutting	1
2845	Nozzle, Blow gun (air line)	1
2865	Oiler, Bench	6
2870	Oiler, Pump	1
2885	Oilstone, Carving tool slips (set)	1
2890	Oilstone, Combination, India	1
2900	Oilstone, Gouge slip	1
2905	Oilstone, Slip	1
2932	Pan, Dust	1
3000	Plane, Block	3
3005	Plane Iron, Double	24
3010	Plane, Jack	18
3015	Plane, Jointer	2
3030	Plane, Rabbet	4
3035	Plane, Router	4
3040	Plane, Smoothing	6
3085	Pliers, Combination (6")	2
3170	Pliers, Vise-grip wrench	2
3360	Protractor, Machinist's bevel	2
3455	Punch, Center (set)	3
3700	Rule, Flexible, Steel tape (8')	4
3705	Rule, Flexible, Steel tape (10')	4
3715	Rule, Flexible, Steel tape (25')	1
3720	Rule, Flexible, Steel tape (50')	1
3725	Rule, Flexible, Steel tape (100')	1
3750	Rule, Steel (12")	18
3755	Rule, Steel (24")	6
3760	Rule, Steel (36")	3
3820	Saw, Back	6
3845	Saw, Coping	6
3850	Saw, Hack (hand)	1
3865	Saw, Hand, Crosscut	4
3870	Saw, Hand, Rip	4
3887	Saw, Keyhole	1

3925	Scale, Architect's	1	3905	Saw, Veneer	4
3965	Scissors	4	3925	Scale, Architect's	1
3980	Scraper, Cabinet	4	3965	Scissors	4
3995	Scraper, Hand	6	3980	Scraper, Cabinet	4
4040	Screwdriver, Offset ratchet	1	3995	Scraper, Hand	6
4045	Screwdriver, Offset, Straight slot (set)	2	4040	Screwdriver, Offset ratchet	1
4050	Screwdriver, Phillips (set)	2	4045	Screwdriver, Offset, Straight slot (set)	2
4060	Screwdriver, Spiral ratchet	2	4050	Screwdriver, Phillips (set)	2
4070	Screwdriver, Standard bit (round blade) (set)	2	4060	Screwdriver, Spiral ratchet	2
4165	Shield, Face	12	4070	Screwdriver, Standard bit (round blade) (set)	2
4295	Soldering Copper, Electric	1	4165	Shield, Face	12
4400	Spokeshave, Convex bottom	4	4295	Soldering Copper, Electric	1
4405	Spokeshave, Straight	4	4400	Spokeshave, Convex bottom	1
4455	Spray Gun Outfit	1	4405	Spokeshave, Straight	4
4480	Square, Combination	2	4455	Spray Gun Outfit	1
4490	Square, Steel framing	6	4480	Square, Combination	2
4495	Square, Try (6")	24	4490	Square, Steel framing	6
4505	Square, Try (12")	4	4495	Square, Try (6")	24
4775	T Bevel	3	4505	Square, Try (12")	4
4965	Trammel Points	2	4775	T Bevel	2
4990	Triangle, 30°-60° (8")	1	4965	Trammel Points	2
5005	Triangle, 45° (8")	1	4990	Triangle, 30°-60° (8")	1
5070	T Square	1	5005	Triangle, 45° (8")	1
5135	Vise, Bench, Drill	1	5070	T Square	1
5145	Vise, Mitre	1	5135	Vise, Bench, Drill	1
5260	Wrench, Adjustable end (8")	1	5145	Vise, Mitre	1
5280	Wrench, Allen key (hex) (set)	1	5280	Wrench, Allen key (hex) (set)	1
5335	Wrench, Open end (set)	1	5335	Wrench, Open end (set)	1
5360	Wrench, Socket (3/8" drive) (set)	1	5360	Wrench, Socket (3/8" drive) (set)	1

III. Experimental and Research Equipment

Code	Item	Number
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III. Experimental and Research Equipment

Code	Item	Number
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0100	Balance, Beam	1
2190	Hot Plate, Electric	1
2225	Jack, Auto, Hydraulic (standard type) (1½ ton)	3

65

			2590	Meter, Galvanometer	1
			2605	Meter, Moisture content (electric)	1
			2610	Meter, Volt-ohm (multi- range)	1
2660	Microscope	1	2660	Microscope	1
			2915	Oven	1
			3265	Press, Hydraulic, Heated platen	1
			3940	Scale, Household	1
			3945	Scale, Laboratory	1

IV. General Furnishings

Code	Item	Number
0160	Bench, Demonstration	1
0250	Bench, Woodworking (2 place)	8
0255	Bench, Woodworking (4 place)	2
0405	Bookcase	2
0540	Cabinet, Filing	2
0542	Cabinet, Finishing (str)	1
0575	Cabinet, Machine accessory	1
0580	Cabinet, Nail and screw storage	1
0620	Cabinet, Storage	1
0625	Cabinet, Tool storage	1
0755	Chair, Teacher's	1
1025	Compressor, Air	1
1235	Desk, Teacher's	1
1405	Dust Collection System	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1
2980	Pencil Sharpener, Standard	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
3540	Rack, Glue clamp	1

IV. General Furnishings

Code	Item	Number
0160	Bench, Demonstration	1
0170	Bench, Electric demonstration	1
0250	Bench, Woodworking (2 place)	8
0255	Bench, Woodworking (4 place)	2
0405	Bookcase	2
0540	Cabinet, Filing	2
0542	Cabinet, Finishing (str)	1
0575	Cabinet, Machine accessory	1
0580	Cabinet, Nail and screw storage	1
0620	Cabinet, Storage	1
0625	Cabinet, Tool storage	1
0755	Chair, Teacher's	1
1025	Compressor, Air	1
1235	Desk, Teacher's	1
1405	Dust Collection System	1
1592	Fire Blanket	1
1593	Fire Extinguisher	3
1600	First Aid Kit	1
2980	Pencil Sharpener, Standard	1
3340	Projector, Filmstrip (35mm) and slide (2" x 2")	1
3345	Projector, Motion picture, Sound	1
3350	Projector, Overhead	1
3540	Rack, Glue clamp	1

4010	Screen, Projection	1	3568	Rack, Roll, Wrapping paper	1
			4010	Screen, Projection	1
4670	Table, Drafting	1	4445	Spray Booth, Dry	1
4690	Table, Overhead projector	1	4670	Table, Drafting	1
4675	Table, Finishing	1	4690	Table, Overhead projector	1
			4675	Table, Finishing	1
			4715	Table, Spraying	1

II. EQUIPMENT SPECIFICATIONS

Introduction:

The items of equipment described below are alphabetically arranged and chronologically numbered. In addition, each item is followed by a listing of the Sections that recommended their inclusion. Where Sections recommended equipment identical in name but not in detail, their unique specification has been separated and so designated.

It was not intended that purchases could be made directly from this Equipment Guide without further resort to catalogs and more detailed specification. The items are specified only in general terms so that they may be clearly identified. Most items bear basic sizes, dimensions, capacities, and safety considerations where they apply. Special care was exercised to avoid the reference to a particular brand name or company—especially when equivalent equipment is available from more than one source.

MASTER LIST OF EQUIPMENT

- 0005 Adaptor, Socket**
General Shop
For socket wrenches; $\frac{3}{8}$ " to $\frac{1}{2}$ " drive.
- 0010 Adaptor, Socket**
General Shop
For socket wrenches; $\frac{1}{2}$ " to $\frac{3}{8}$ " drive.
- 0015 Airbrush**
Ceramics: beginning, advanced
Graphic Arts: advanced
With single control for air and ink; fine, medium, and heavy heads (with $\frac{1}{4}$ oz. color cup, 3 oz. color bottle); hanger; hose coupling; 10' hose and fittings; reamer; instructions; protective case.
- 0020 Aligner, Connecting rod**
Auto and Power Mechanics: advanced
With bend and twist indicator; V block; bending bar.
- 0025 Alignment Tool (set)**
Electricity-Electronics: beginning, advanced
Basic set of trim tools for radio/T.V. r.f alignment.
- 0030 Alternator-Generator-Regulator Test Stand
(Alternator Test Equipment, set)**
Auto and Power Mechanics: advanced
For all 6, 12, 24, and 32 volt testing at outputs up to 700 watts; for all passenger cars and light truck equipment; to develop over 2 HP; 220 V, single phase.

0035 Analyzer, Capacitor

Auto and Power Mechanics: advanced

Capacitance bridge measures up to 2000 uF in 5 overlapping ranges; insulation resistance of papers, ceramics, and micas directly read on large meter; dual range; leadage current read directly on meter; variable ranges of DC voltage for testing at exact rated voltage; reads power factor of electrolytics; meter protector of solid-state design; color-keyed push buttons for instant range selection.

0040 Analyzer, Engine

Auto and Power Mechanics: advanced

Motor tune-up tester; portable unit; includes scope; combustion booster unit; coil breaker unit; tach-dwell unit; condenser-vacuum unit; head frame assembly; portable cabinet; complete motor tester model.

0045 Anvil

Auto and Power Mechanics: beginning, advanced

General Shop

Metalworking: beginning, advanced

100 lb.; face: tool steel, tempered, ground and polished; horn: covered with tough untempered steel; horn tip all steel; stand.

0050 Apron, Foundry

General Shop

Metalworking: beginning, advanced

Leather, approximately 44"L.

0052 Apron, Rubber

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

0055 Apron, Welding

General Shop

Metalworking: beginning, advanced

Leather; approximately 44"L.

0060 Arbor, Milling machine

Metalworking: advanced

1-inch, "B" bearing.

0065 Atomizer

Ceramics: beginning, advanced

General shop

Lightweight, well balanced, self-draining, designed to be used in one hand and for water base gum binders.

0070 Autoclave

Plastics: beginning, advanced

Steam pressure regulated to 50 p.s.i., min. capacity 2'gals., safety

locks on doors, steam generator included if high pressure steam not available.

0075 Automatic Transmission Tool (set)

Auto and Power Mechanics: advanced

A complete unit to facilitate service, repair, and adjustment of various automatic transmissions.

0080 Awl, Bookbinder's

Graphic Arts: beginning, advanced

Detachable sharp steel point 3"L; point tightly clamped into a hardwood, leather topped handle; points are removable by means of a key.

0085 Awl, Brad

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

0090 Awl, Scratch

Elementary

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced
6-inch.

0095 Awl, Stitching, Automatic

General Shop

0100 Balance, Beam

Woodworking: advanced

Triple-beam; accurate to one-hundredth of a gram.

0105 Ball Mill, Roller type

Ceramics: beginning, advanced

2 gal. size. To be bolted on stand or bench. Requires $\frac{1}{4}$ to $\frac{1}{3}$ HP electric motor.

0110 Banding Wheel, Potter's Bench

Ceramics: beginning, advanced

Iron type—extra heavy cast iron wheels are machines with precision and perfectly balanced. Turntable marked with concentric circles. Ball bearing movement.

0115 Bar Folder

General Shop

Metalworking: beginning, advanced

30-inch, adjustable, counter-balanced.

0120 Bar, Pry

Auto and Power Mechanics: beginning, advanced

Alloy steel: rolling head; 12" x $\frac{7}{16}$ " diameter.

- 0125 Bar, Wrecking**
Woodworking: beginning, advanced
Forged steel: hex stock; $\frac{3}{4}$ " x 24"L.
- 0130 Battery Eliminator and Charger**
Auto and Power Mechanics: beginning, advanced
Up to 75 ampere output for 6 V fast charge; up to 50 ampere output for 12 V fast charge; protection against overload; air cooled by fan; ammeter with 2% accuracy on full deflection of scale; equipped with leads.
- 0135 Battery, Storage (6-volt)**
Auto and Power Mechanics: beginning, advanced
Standard.
- 0140 Battery, Storage (12-volt)**
Auto and Power Mechanics: beginning, advanced
Standard.
- 0145 Bellows, Molder's**
General Shop
Metalworking: beginning, advanced
Woodworking: beginning, advanced
8-inch; made of high grade sheepskin.
- 0150 Bench, Arc welding**
General Shop
Metalworking: beginning, advanced
Plastics: advanced
Two station; with fire-proof curtain.
(Must conform to ASA standards)
- 0155 Bench, Bookbinding (unit)**
Graphic Arts: beginning, advanced
Top 2" thick of solid wooden core with plastic laminated surface, washable, durable, resistant to glues, stains, water; base of heavy guage steel, tension bolted for strength and rigidity; complete with one steel shelf and two stacking type steel drawers; 72"L x 34"W x 34"H.
- 0160 Bench, Demonstration**
Graphic Arts: advanced
Woodworking: beginning, advanced
 $1\frac{3}{4}$ " x 28" x 60" laminated maple top, solid maple base, locking casters, peg board tool panels for hand tools, double door cabinet.
- 0165 Bench, Electric (with test panel)**
General Shop
 $1\frac{3}{4}$ " x 30" x 6' top; includes AC voltmeter (0-5V, 0-50V, 0-300V), AC ammeter (0-1A, 0-5A, 0-25A), wathhour meter, transformer, 120V.

primary and 4-8-16-24V secondary; with fuse box, switches, receptacles, circuit breaker, bell and buzzer: Input 120 volt AC; 1 phase; 30 amps.

0170 Bench, Electric demonstration

Electricity-Electronics: advanced

Woodworking: advanced

6' x 30", w/cabinet storage under variable 0-120 volt AC and DC outlets.

0175 Bench, Elementary, Work

Elementary

Woodcraft type; 4-station; hardwood construction throughout; top approximately 36" x 47"; recommended height: kindergarten—24", primary—27", intermediate (6, 7, 8, 9)—30"; with storage for 25-50 junior-sized general-craft hand tools; bench is available with following tool assortment:

1 bench brush	1 nail set
1 bit, dowel, 1/4"	1 manual, instruction
1 bit, dowel, 3/8"	1 plane, block
1 bit, dowel, 1/2"	1 rule, bench, 12"
1 bit brace, 8"	2 sanding blocks
2 "C" clamps, 2"	2 saws, coping
2 files, cabinet, 8"	1 saw, hand, 16"
1 file, round, 8"	2 sawbacks
1 hammer, nail, 10 oz.	1 screwdriver, 4" x 3/16" tip
1 hand drill, hollow handle	1 try-square, 6", all steel

0180 Bench, Gas welding

General shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Two station style, with open space below tops, sturdy all steel construction, tops to be provided with framing to hold fire-brick (with fire-brick installed), back board on both sides of separating partition to be covered with durable asbestos boards, equipped with a pre-assembled manifold with valves and regulators.

0185 Bench Hook

Elementary

Wood, approximately 5/8" x 5" x 10" with end cleats centered to permit right and left hand use. (Usually home-made.)

0190 Bench, Island, Double-face

Electricity-Electronics: beginning, advanced

6' x 48", with 12 steel lockers in base cabinet; top to be non-conducting pressed board, wood, or laminated plastic.

0195 Bench, Machine

Metalworking: beginning, advanced

Plastics: beginning, advanced

Hard maple top, approximately 2¼" x 40" x 96", height 32", storage for sheet metals under, one stake plate.

- 0200 Bench, Marble slab**
Ceramics: beginning, advanced
- 0205 Bench, Metalworking (2 place)**
General Shop
Top 60" x 40" x 2¼", laminated maple, height 32", angle iron edges, one shelf.
- 0210 Bench, Metalworking (4 place)**
Auto and Power Mechanics; beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Top 2¼" T x 24" W x 7" L, laminated maple with 2" x 2" x ⅛" angle iron fitted flush to work surface on both edges, legs welded heavy gauge steel with floor feet, 21" top span and 30" high, one stringer on each side for bracing.
- 0212 Bench, Molding**
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Steel construction; size approximately 30" x 60" x 32"H. Trough galvanized for damp sand storage; storage below for tools, etc.
- 0215 Bench, Plaster**
Plastics: beginning, advanced
Stainless steel top approximately 26" x 96", stainless steel sink, area under for storage.
- 0220 Bench, Saw**
Elementary
Versatile saw "trestle"; top approximately 13" x 24"; 18" high. Slot through center of bench to allow sawing with no crossbar or other interference.
- 0225 Bench, Sheet metal (with stake plates)**
General Shop
Metalworking: beginning, advanced
Top 60" x 40", x 2¼", laminated maple, height 32", angle iron edges, 3 shelves, with 2 stake plates 30" x 8".
- 0230 Bench, Soldering**
General Shop
Metalworking: beginning, advanced
Steel, transite covered top, 6' x 30" W x 32" H; steel storage cabinet below.
- 0235 Bench, Spot welding**
Metalworking: beginning, advanced
All steel construction, 5' x 24" top; steel storage cabinet below.

0240 Bench, TIB welding

Metalworking: advanced

Two station style, with protective fire-proof curtain and curtain rack, all metal construction, tops provided with steel grating over a sheet of asbestos board, back boards on both sides of separating partition to be covered with durable asbestos board, open space to be provided below table tops for installation of power units.

0245 Bench, Wall type

General Shop

Top 100" x 24" x 2 1/4" T; laminated maple, height 32", 3 pairs legs, bolted construction, w/lower shelf; enclosed cabinet.

0250 Bench, Woodworking (2 place)

Woodworking: beginning, advanced

2 1/4" x 28 1/2" x 64" edge-grain laminated hard maple top, bases of either wood or metal, containing double door cabinets, lockers, or drawers, base units 36"W x 21"D, overall bench height 33 1/4", supplied with 2 vises.

0255 Bench, Woodworking (4 place)

Ceramics: beginning, advanced

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

2 1/4" x 54" x 64" edge-grain laminated hard maple top with angle steel splines, top mounted on two 36"W x 21"D x 31"H base units of either wood or metal, containing double door cabinets or lockers, equipped with 4 vises.

0260 Bender, Universal

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

On stand; capacity: radius 6" to 12", round mild steel bar 1/2", steel tubing 16 ga. 3/4" O.D., flat steel bar (bent flat) 1/4" x 1 1/2"; including accessories for variety of common bends in flats, rounds, and tubing.

0265 Bending Jig, Adjustable

General Shop

Bending posts of machine steel, fixed-one hardened; to take metal up to 1"W and 1/2"T.

0270 Beveler

Elementary

For edges of leather.

0280 Binding Unit, Plastics

Graphic Arts: beginning, advanced

Hand operated punching machine and hand operated binding machine; both lightweight and portable; maximum punching and binding length 12"; ring binder capacity $\frac{1}{4}$ " to 2" diameter.

- 0285 Bit, Auger (set)**
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
Sizes 4 to 16; single thread screw.
- 0290 Bit, Combination drill and countersink (set)**
Woodworking: beginning, advanced
Sizes: $\frac{3}{4}$ " x #6, #7, #8; 1" x #6, #7, #8; $1\frac{1}{4}$ " x #8, #10; $1\frac{1}{2}$ " x #8, #10, #12.
- 0295 Bit, Combination drill and counterbore (set)**
Woodworking: beginning, advanced
Sizes: 1" x #8, #10; $1\frac{1}{4}$ " x #8, #10; $1\frac{1}{2}$ " x #10, #12.
Bit, Countersink (see: Countersink Bit (for brace) (set) #1065).
- 0300 Bit, Electrician's**
General Shop
Woodworking: advanced
18"L x $\frac{5}{16}$ " diameter.
- 0305 Bit, Expansive**
Elementary
General Shop
Woodworking: beginning, advanced
Boring: from $\frac{7}{8}$ " to 3"; square tang.
- 0310 Bit, Extension**
Woodworking: beginning, advanced
18-inch.
- 0315 Bit, Forstner (brace set)**
Woodworking: beginning, advanced
Sizes: 6, 8, 10, 12, 14, 16 (in 16ths of an inch).
- 0320 Bit, Forstner (machine set)**
General Shop
Woodworking
 $\frac{1}{2}$ -inch shank; sizes: 6, 8, 10, 12, 14, 16 (in 16ths of an inch).
- 0325 Bit, Multi-spur (set)**
Woodworking: beginning, advanced
Set of 11; sizes: $\frac{1}{2}$ " to 1" by 16ths plus $1\frac{1}{8}$ " and $1\frac{1}{4}$ ".

- 0330 Bit, Plug cutter (set)**
 General Shop
 Woodworking: beginning, advanced
 Set of 5, sizes: $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ ", 1".
- 0335 Bit, Screwdriver (set)**
 Electricity-Electronics: beginning, advanced
 General Shop
 Square tang; for use with brace; $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ".
- 0340 Bit, Speed (set)**
 Electricity-Electronics: beginning, advanced
 Sizes: $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ ", 1".
- 0345 Bit, Twist, Car**
 Woodworking: beginning, advanced
 $\frac{3}{8}$ " x 18" with square tang.
- 0350 Bleeder, Brake**
 Auto and Power Mechanics: beginning, advanced
 Lightweight pressure tank; capacity 1 gallon; pressure dial 0-60 lbs.; safety valve set for 40 lb. release; means of checking fluid level visibly; fluid shut-off valve on hose; sediment screen; with adapters to accommodate all makes of cars and light trucks.
- 0360 Block, Proofing**
 Graphic Arts: beginning, advanced
 $3\frac{1}{4}$ " x 8" x $2\frac{1}{2}$ "; maple wood; varnished; leather top faced with easily replaced thick felt.
- 0365 Block, Sanding**
 Woodworking: beginning, advanced
 Rubber, to use $2\frac{3}{4}$ " x 9" paper.
- 0370 Blow Torch**
 Elementary
 Portable propane torch with pencil burner and replaceable cylinder.
- 0375 Blunger**
 Ceramics: beginning, advanced
 For casting and forming; $\frac{1}{4}$ HP; smaller size adequate for school or studio.
- 0380 Board, Cutting**
 Elementary
 Maple; approximately $\frac{3}{4}$ " x 8" x 10"; for leather.
- 0385 Board, Drafting**
 Drafting: beginning, advanced
 General Shop
 Seasoned basswood, zinc-plated steel end cleats, both front and back

sanded smooth to provide two drafting surfaces, sizes optional, recommend 18" x 24" for beginning, either 24" x 36" or 31" x 42" for advanced, all boards $\frac{3}{4}$ " thick.

0390 Boards, Pressing

Graphic Arts: beginning, advanced

$\frac{3}{4}$ " x 9" x 12"; hard maple; glued narrow strip construction to prevent warping; smooth finish; metal bindings fastened with screws.

0395 Body-Fender Tools (set)

Auto and Power Mechanics: beginning, advanced

Toe dolly; heel dolly; general purpose dolly; anvil dolly; 26 $\frac{1}{2}$ "L body pick with slight curve sharp point; 31"L body pick with curve and point at right angles to shaft; hammers: reverse curve light bumping, wide face shrinking, picking and dinging, pick; vixen files: flat, half round, curved round, curved flat.

0400 Bone Folder

General Shop

Graphic Arts: beginning, advanced

1"W x 8"L; one pointed end; made of genuine bone; polished.

0405 Bookcase

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Plastics: beginning, advanced

Metalworking: beginning, advanced

Woodworking: beginning, advanced

Approximately 60" high, 10" to 12" deep, 72" long; closed back shelving with 3 shelves adjustable by increments of $\frac{1}{2}$ ", wood or metal; open.

Graphic Arts: Steel safety cabinet with sliding tambour doors; 3 adjustable shelves; lock and key; dustproof; 30 $\frac{1}{2}$ "W x 37 $\frac{1}{2}$ "H x 17"D.

0410 Borders, Decorations, Miscellaneous

General Shop

Type high.

0415 Boring Bar (set)

Metalworking: advanced

Set of 3 bars, $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ " dia. bars with 90°, 45°, and 30° end caps.

0420 Boring Bar (cylinder set)

Auto and Power Mechanics: advanced

Capacity 2.600"-5.250" to depth of 14" cutting at speed of 1 3/4" per minute; 1/4 HP, 3 Amp. 115V motor; with accessories.

0425 Box, Clay Storage, Portable

Ceramics: beginning, advanced

General shop

Metal lined for storage of damp materials; with casters.

0430 Brace, Ratchet

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

10-inch; box ratchet; universal jaws; ball bearing head.

0435 Bracket, Saw horse (pair)

Woodworking: beginning, advanced

Steel; for 2" x 4" lumber.

0440 Brad Driver

Elementary

Automatic; self-centering.

0445 Brake Adjusting Tool (Spoons) (set)

Auto and Power Mechanics: beginning, advanced

1 Bendix 8"L; 1 Chevrolet adjusting tool 5 1/4"L; 1 Brake adjusting tool 8 1/4"L.

0450 Brake, Box and pan

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

24-inch, capacity 16 ga., depth of box 3", adjustable angles 0° to 135°.

0455 Brake, Service shop machine

Auto and Power Mechanics: advanced

Mobile; 1 brake drum lathe with 1/2 HP motor, and all standard accessories, including adapters for all passenger cars and light trucks; mobile bench with accessory storage board; brake shoe grinder with 1/3 HP motor and all standard accessories; universal brake drum micrometer; brake surface cylinder hone; brake shoe grinding clamp.

0460 Brayer, Block printing

Elementary

Graphic Arts: beginning, advanced

4-inch width.

0465 Broom, Push

Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
18-inch length; 3-inch trim; with handle.

0470 Brush, Bench

Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Drafting: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
8-inch brush, 13" overall.

0475 Brush, Bookbinder's

Graphic Arts: beginning, advanced
1" or 1½" diameter; round; grey elastic bristles copper bound and vulcanizer in rubber.

0480 Brush, Duster, Draftsman's

Drafting: advanced
General Shop
2½-inch white bristles, staple set in hardwood, 5" handle, 13" overall length, flat beveled style.

0485 Brush, Flat padding

Graphic Arts: beginning, advanced
1½"W; nickel plater ferrule vulcanized in rubber; black bristle.

0490 Brush, Opaque

Graphic Arts: beginning, advanced
Sizes 00 and 1; camel hair; needle sharp; extra stiff; narrow.

0495 Brush, Type

Graphic Arts: advanced
Approximate size 2½" x 5"; hardwood oval back; stiff hair bristles.

- 0500 Brush, Wire**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Overall length: 10"-14", width 1" wire length approximately 1-3/16".
- 0505 Buffer, Long arm**
Metalworking: advanced
Long arm on pedestal, 33" between wheels, 5/8" arbor; motor: 3/4 HP, 3450 RPM, 220V, 3 phase, 600 cycles; magnetic starter.
- 0510 Buffer, Pedestal**
Elementary
General Shop
Metalworking: beginning
Plastics: beginning, advanced
2-6" x 1" muslin wheels, wide clearance design; motor: 1/3 HP, 1725 RPM, 115V, single phase, 60 cycle; manual starter with overload protection.
Plastics: Add: built-in dust collector with filters and dust bag, illumination over wheels.
- 0515 Bulb, Sponge**
General Shop
Metalworking: beginning, advanced
8 oz., rubber bulb, camel hair brush.
- 0520 Burnisher**
Elementary
General Shop
Woodworking: beginning, advanced
Round, tempered steel, 4 1/2" blade.
- 0525 Cabinet, Damp-proof**
Ceramics: beginning, advanced
General Shop
Base type; keeps clay MOIST AND WORKABLE. Double-wall type door. Interior of tempered zinc panels. Doors close against molded rubber gasket. Size 18"D x 36"L x 31"H.
- 0530 Cabinet, Drying**
Ceramics: beginning, advanced
General Shop
Base type; constructed of steel and expanded metal. Has interior shelf. 18"D x 36"L x 31"H. Low heat supply with air exhaust. Baked enamel finish.
- 0535 Cabinet, Drying rack**
Graphic Arts: beginning, advanced

Steel construction with reinforced top; 4 legs; open sides; to include 14 drying racks 20" x 28½" x 1⅛"; racks removable from table; inter-locking side rails to prevent shifting; floor space 25" x 30"; height 40".

0540 Cabinet, Filing

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Four drawer, full cradle suspension, full plunger lock, aluminum hardware, size 52"H x 15"W x 28½"D.

0542 Cabinet, Finishing (storage)

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

All steel construction; adjustable shelves; 2 doors with locks.

0545 Cabinet, Film cutter

Graphic Arts: advanced

Steel construction; light tight; 4 drawers; large storage area near bottom; to accommodate 20" x 24" film; 24" trimmer mounted on top of cabinet; side shelf mounted on right side; floor dimensions 36" x 25".

0550 Cabinet, Galley

Graphic Arts: beginning, advanced

Heavy gauge steel; welded unit construction; galley runs of steel with smooth finish and providing ample clearance for easy movement of galleys; hard baked enamel finish; galleys capacity 50; galley size 8¾" x 13" or 10" x 16".

0555 Cabinet, Glaze and library

Ceramics: beginning, advanced

For filing sample glazes, reference manuals and catalogs. With 10 removable compartments. 12"D x 36"W x 13½"H. With shelf 22"H. Compartment 3" x 9" x 11".

0560 Cabinet, Ink and roller

Graphic Arts: beginning, advanced

30"W x 25"D x 40"H; steel construction; top of heavy steel; drawer

at top divided into 3 equal sections, one to include a 10" x 12" ink mixing slab; 2 hinged doors with locks below the drawer; left section contains 3 vertical slides, each of which can hold 6 rollers, maximum 24"L; right section contains 3 large ink shelves and a rag bin.

0565 Cabinet, Instrument storage

Electricity-Electronics: beginning, advanced
30"W x 18"D x 72"H w/adjustable shelves and lock.

0570 Cabinet, Mechanics, Roller

General Shop
27 $\frac{1}{4}$ " x 18 $\frac{1}{4}$ " x 32"H, with 3 drawers and storage compartment.

0575 Cabinet, Machine accessory

Woodworking: beginning, advanced
2 $\frac{1}{4}$ " x 22" x 54" edge-grain laminated hard maple top; base of either wood or metal, containing eight drawers; base size 36"W x 21"D x 31"H.

0580 Cabinet, Nail and screw storage

Woodworking: beginning, advanced
22 $\frac{1}{2}$ " high; 48 see-through plastic drawers; drawer size 2 $\frac{3}{4}$ "W x 1 $\frac{7}{16}$ "D x 5 $\frac{7}{8}$ "L.

0585 Cabinet, Paper and drawing storage

General Shop
Hardwood, 84" x 48" x 24", adjustable shelves, w/lock.

0590 Cabinet, Parts storage

Electricity-Electronics: beginning, advanced
Plastics: beginning, advanced
Metal, individual drawers approximately 5 $\frac{1}{4}$ " x 2 $\frac{3}{4}$ " x 11 $\frac{3}{8}$ ", approximately 100 drawers.

0595 Cabinet, Plate filing

Graphic Arts: beginning, advanced
14"W x 24"D x 25 $\frac{1}{2}$ "H; steel construction; dustproof; mounted on 4 ball bearing steel wheels; swivel style; must accommodate hanger-envelopes, clip style hangers and hook style hangers; storage capacity: 150—10" x 14" press plates and negatives, 75—11" x 17", 14" x 17", 14" x 20" press plates and negatives; to include hanger-envelopes, clip-hangers, hook-hangers.

0600 Cabinet, Proof press

General Shop
Metal, 36" x 24" x 50"H.

0605 Cabinet, Quarter case

Graphic Arts: beginning, advanced
10 $\frac{3}{4}$ "W x 18 $\frac{1}{4}$ "D x 38 $\frac{1}{4}$ "H; steel construction; capacity for 20 quarter size cases; furnished with 12 assorted cases: 2 rule cases,

2 space and quad cases, 2 handy pack cases, 2 figure cases, 2 small cap font cases, 2 figure and fraction cases.

0610 Cabinet, Sheet plastics storage

Plastics: beginning, advanced

Metal; vertical dividers providing 12 bins, each approx. 4"W x 24"D x 36"H; door w/lock.

0615 Cabinet, Small parts

Metalworking: beginning, advanced

Steel; 36"W x 12"D x 73"H; one bin 36"W x 12"D x 11"H; three bins 12"W x 12"D x 12"H; six bins 6"W x 12"D x 12"H; one 24 drawer unit, each drawer 5 $\frac{1}{4}$ "W x 11"D x 1 $\frac{3}{8}$ "H; two 18 drawer units, each drawer 5 $\frac{1}{4}$ "W x 11"D x 2 $\frac{5}{8}$ "H w/two adj. dividers per drawer; 18 box drawers 8 $\frac{1}{4}$ "W x 11"D x 4 $\frac{5}{8}$ "H w/one adj. divider per drawer; double doors w/lock.

0620 Cabinet, Storage

Drafting: beginning, advanced

Elementary

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Drafting: 2-door; overall size 36" x 24" x 78"; one piece welded frame construction, w/four shelves; adjustable on 2" centers; three point locking device, chrome door handles and full, flush sanitary base.

Elementary: Steel construction, double swing-type doors, movable shelves, approx. 36" x 78" x 24"D.

Graphic Arts: 76"H x 36"W x 18 $\frac{1}{2}$ "D; heavy steel construction; lock and key provided; 2 swinging doors; 4 adjustable shelves.

Metalworking: Steel; 36"W x 18"D x 78"H; swinging double door style; 4 adj. shelves; three point locking device and lock; flush base.

Plastics: Metal; combination of bins and shelves; doors w/locks; approx. size 36" x 12" x 84".

Woodworking: 32"W x 22"D x 84"H; 4 full-width shelves 29"W x 19"D, adjustable; wood or metal construction.

0625 Cabinet, Tool storage

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Approx. 62"W x 22"D x 84"H; constructed of heavy maple framing and birch plywood panels; doors 1 $\frac{1}{8}$ " thick; locks and hardware heavy duty; upper section and doors form panels for tools, lower section for storage; with tote trays and/or adjustable shelves, with doors and locks.

- 0630 Cabinet, Type, Double tier**
 General Shop
 72" x 37 3/4", height of sloping back 40 1/2"; lead and slug rack, w/44 type cases.
- 0635 Cabinet, Type, Single tier**
 Graphic Arts: beginning, advanced
 Steel construction; school type; steel working top sloping front and back; 22 case body includes 1 steel front blank case, 2 steel front wells job cases, 19 steel front California job cases; includes a lead and slug rack, galley and quarter case unit; locking device for cases; floor space 32 1/4" x 42 1/2"; height to work surface 41"; overall 46"H; work area each side 32 1/4" x 17".
- 0640 Caliper, Hermaphrodite**
 Auto and Power Mechanics: advanced
 Metalworking: beginning, advanced
 6" length; lock joint, w/adjustable point.
- 0645 Caliper, Inside (6")**
 Auto and Power Mechanics: beginning, advanced
 Drafting: advanced
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Solid nut; bow spring.
- 0650 Caliper, Inside (8")**
 General Shop
 Solid nut; bow spring.
- 0655 Caliper, Outside (5")**
 Auto and Power Mechanics: beginning, advanced
 Drafting: advanced
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Solid nut; bow spring.
- 0660 Caliper, Outside (8")**
 General Shop
 Metalworking: advanced
 Solid nut; bow spring.
- 0665 Caliper, Vernier**
 Auto and Power Mechanics: advanced
 Metalworking: advanced
 5" capacity readable in thousandths with vernier. Inside and outside jaws and depth gauge, locking device and friction roller.

0670 Camera, Copying

Graphic Arts: advanced

Horizontal, dark room type, process camera; all metal, primarily of aluminum castings, construction; focusing accomplished by means of accurate scales; vacuum film holder, hinged to camera; ground glass, hinged to camera; electric timer and control panel to control the solenoid shutter and the camera lamps; lens, color corrected, multi-element, enlargement 2 times, reduction 5 times, anastigmat; copy-board, glass covered frame, equipped to take irregular copy thickness; lamps, 4 incandescent 1500 watt bulbs; flash lamp, attached for flashing through the lens; maximum film size 16" x 20"; single phase, 110 V, AC, 60 cycle.

0675 Camera, Range finder (35mm)

Graphic Arts: beginning, advanced

Includes single-window range and viewfinder with life-size image; f/2.8 lens; speed 1 second to 1/1000th and B; one stroke film advance and shutter-wind lever; automatic flash synchronization for both conventional flash bulbs and electronic flash; built-in self timer (up to 10 seconds delay); shutter-coupled exposure meter; flash unit; gadget bag for camera and accessories.

0680 Camera, Reflex, Single lens (35mm)

Graphic Arts: beginning, advanced

Pentaprism viewfinder; multi-split range finder; 50mm f 1.9 fully automatic lens; rapid rewind crank; rapid film winding lever; exposure counter; shutter speed of 1 second to 1/1000 second and bulb; easy lens removal; flash unit (conventional); extension tubes for close-up work; wide angle lens; telephoto lens.

0685 Camera, Reflex, Twin lens

Graphic Arts: beginning, advanced

Interchangeable lenses, equipped with 105mm f 3.5 normal focus lens, 65mm f 3.5 wide angle lens, and 180mm f 4.5 telephoto lens; 1 second to 1/500th lens speed; rapid-wind crank; which prevents accidental double exposures, but does permit when desired; removable viewing hood which interchanges with eyelevel finders; cable release socket; standard flash; gadget bag for camera and accessories.

Can, Benzene (see: Container, Benzene #1045)

0690 Can, Carwash

Auto and Power Mechanics: advanced
3 gallon; galvanized pail.

0695 Can, Oil filler and measure (1 qt.)

Auto and Power Mechanics: beginning, advanced
Copper plated steel construction.

0700 Can, Oil filler and measure (2 qt.)

Auto and Power Mechanics: beginning, advanced

Copper plated steel construction.

- 0705 Can, Oil filler and measure (5 qt.)**
Auto and Power Mechanics: beginning, advanced
Copper plated steel construction.
- 0710 Can, Oily waste**
Auto and Power Mechanics: beginning, advanced
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
10 gal. capacity; Underwriter's Laboratory approved; foot opening,
automatic closing.
- 0715 Can, Radiator**
Auto and Power Mechanics: advanced
2 gallon capacity; plastic; curved spout.
- 0720 Can, Safety (1 qt.)**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Metal: one qt. capacity; spout w/safety spring hand lever to open;
with safety screen in nozzle.
- 0725 Can, Safety (1 gal.)**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Metal; one gal. capacity; spout w/safety spring hand lever to open;
with safety screen in nozzle.
- 0728 Can, Safety (5 gal.)**
Metal, five gallon capacity; spout with safety spring hand lever to
open; with safety screen in nozzle.
- 0730 Capacitor Substitution Box**
Electricity-Electronics: beginning, advanced
100 mmf. to .111 mfd.; 350 WVDC.

0735 Carburetor Repair Set

Auto and Power Mechanics: advanced

Cleaning tank; cleaning solvent; tools in sets according to brand of carburetor.

0740 Cards, Alphabet (set)

Graphic Arts: beginning, advanced

Sturdy tracing cards to show complete alphabet characters of display type; sizes 12 to 72 point; approximately 125 cards with about 75 popular type faces; each card shows complete upper and lower case alphabets, including figures and punctuation marks; printed both sides on durable bristol; round cornered; set includes wooden box with hinged top to hold complete set.

0745 Cart, Stock

Elementary

Metal construction; approx. 36"L x 24"W x 32"H; equipped with 5" rubber wheeled casters, 2 swivel, 2 stationary.

0750 Cart, Tool

Elementary

Mobile cart to be moved from classroom to classroom. Designed to accommodate 20 students. Provision for nails, screws, fasteners, and miscellaneous supplies plus the following tools, which are "junior sized" whenever possible:

8 auger bits	6 jack planes
4 back saws	6 block planes
2 braces	1 combination pliers
16 4" "C" clamps	1 side cutting pliers
12 coping saws with blades	1 hand rip saw
8 crosscut saws	6 wooden rules
1 countersink	1 scratch awl
2 dividers	3 screwdrivers
7 assorted files	2 pr. scissors
2 file cards	4 combination squares
6 hammers	4 try squares
2 hand drills	6 serrated files with extra blades
3 keyhole saws	6 portable vises
2 nail sets	

Carving Tools (see: Chisel, Carving #0775)

Ceramic Molding Tool (see: Modeling Tool #2705)

0755 Chair, Teacher's

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Welded-steel construction; swivel base w/casters.

Charger, Battery (see: Battery Eliminator and Charger #0130)

0760 Chases, Platen

General Shop
Graphic Arts: beginning, advanced
Cast iron; size to fit platen press; handle-type recommended.

0765 Chisel, Butt (set)

Elementary
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
3" blade; plastic handles; sizes: 1/4", 1/2", 3/4", 1", 1 1/4", 1 1/2".

0770 Chisel, Cape

General Shop
Metalworking: beginning, advanced
1/2" stock, 1/4" cutting edge.

0775 Chisel, Carving (set)

Elementary
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
Set of 6 chisels and gouges; for light wood and linoleum carving;
approx. 6" long.

0780 Chisel, Cold (set)

Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Cutting edges of 1/4", 3/8", 1/2", 3/4".

0785 Chisel, Diamond point (set)

Metalworking: beginning, advanced
1/4", 3/8", 1/2" bits.

0790 Chisel, Gouge, Inside (set)

General Shop

Woodworking: beginning, advanced

Sizes: 1/4", 3/8", 1/2", 3/4", 1".

0795 Chisel, Gouge, Outside (set)

Woodworking: beginning, advanced

Set of 5; sizes 1/4", 3/8", 1/2", 3/4", 1".

0800 Chisel, Round nose (set)

Metalworking: beginning, advanced

1/4", 3/8" bits.

0805 Chisel, Socket firmer (set)

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

Set of 6; sizes 1/4", 3/8", 1/2", 5/8", 3/4", 1".

0810 Chisel, Thonging (4-prong)

Elementary

1/8"; tempered spring steel blades; chrome plated; hand ground cutting edges.

0815 Chisel, Thonging (3-prong)

Elementary

1/8"; tempered spring steel blades; chrome plated; hand ground cutting edges.

0820 Chisel, Thonging (single-prong)

Elementary

1/8"; tempered spring steel blades; chrome plated; hand ground cutting edges.

0825 Chisel, Thonging (single-prong)

Elementary

3/32"; tempered spring steel blades; chrome plated; hand ground cutting edges.

0830 Chisel, Thonging (set)

General Shop

1, 2, 3, and 4 prong; sizes: 3/32" and 1/8"; tempered spring steel blades; chrome plated; hand ground cutting edges.

0835 Chisel, Wood turning (set)

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

Hardwood handles w/metal ferrules and overall length of at least 17"; basic set of 8 to include 1 each: 1" skew chisel, 1" gauge, 1/2" skew chisel, 5/8" gauge, 1/2" round nose, 3/8" gauge, 1/2" spear point, 1/2" parting tool; optional: 1/2" diamond point chisel, 1/2" left skew

chisel, 1/2" right skew chisel, 1/4" round nose chisel, 1/4" diamond nose chisel, 1/4" square chisel.

0840 Chuck, Magnetic

Metalworking: advanced

Permanent ceramic; 4" x 8 1/2" work surface.

0845 Circle Cutter

Plastics: beginning, advanced

Woodworking: beginning, advanced

Heavy duty; 1/2" round shank; capacity 1" to 8" dia.; six extra tool bits.

0850 Clamp, Bar (36")

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

I-bar with solid handle.

0855 Clamp, Bar (48")

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

I-bar with solid handle.

0860 Clamp, Bar (60")

General Shop

I-bar with solid handle.

0865 Clamp, "C" (2")

Elementary

Steel screw; malleable iron clamp.

0870 Clamp, "C" (3")

Elementary

General Shop

Woodworking: beginning, advanced

Steel screw; malleable iron clamp.

0875 Clamp, "C" (4")

Auto and Power Mechanics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced

Steel screw; malleable iron clamp.

0880 Clamp, "C" (6")

Auto and Power Mechanics: beginning, advanced

General Shop

Metalworking: beginning, advanced
Woodworking: beginning, advanced
Steel screw; malleable iron clamp.

0885 Clamp, "C" (8")

Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Woodworking: beginning, advanced
Steel screw; malleable iron clamp.

0890 Clamp, "C" (10")

Auto and Power Mechanics: beginning, advanced
Metalworking: advanced
Steel screw; malleable iron clamp.

0895 Clamp, "C" (12")

Metalworking: beginning, advanced
Steel screw; malleable iron clamp.

0900 Clamp, Corner

Woodworking: beginning, advanced
3" capacity.

0905 Clamp, Fixture (set)

Woodworking: beginning, advanced
For use with $\frac{3}{4}$ " pipe.

0910 Clamp, Handscrew (#3/o)

General Shop
Woodworking: beginning, advanced
Hardwood; jaws open 3", length 6".

0915 Clamp, Handscrew (#0)

General Shop
Woodworking: beginning, advanced
Hardwood; jaws open $4\frac{1}{2}$ ", length 8".

0920 Clamp, Handscrew (#1)

General Shop
Woodworking: beginning, advanced
Hardwood; jaws open 6", length 10".

0925 Clamp, Handscrew (#2)

General Shop
Woodworking: beginning, advanced
Hardwood; jaws open $8\frac{1}{2}$ ", length 12".

0930 Clamp, Handscrew (#3)

General Shop

Woodworking: beginning, advanced
Hardwood; jaws open 10", length 14".

0935 Clamp, Mitre frame

Woodworking: beginning, advanced
With 4 extension rods to give max. capacity of 25" x 24".

0940 Clamp, Spring (#2)

Elementary
General Shop
Heavy gauge steel; jaws open 2".

0945 Clamp, Spring (#3)

Plastics: beginning, advanced
Heavy gauge steel; jaws open 3".

0950 Cleaner, Ring groove

Auto and Power Mechanics: beginning, advanced
To remove carbon from ring grooves without injury to piston; to service all pistons with 5/64, 3/32, 1/8, or 3/16 ring grooves; piston range 2 1/2"-5".

0955 Cleaner, Spark plug

Auto and Power Mechanics: beginning, advanced
Spark indicator test dial; set of rubber cleaner adapters; needle valve for control of air tester; rubber covered high tension wire and clip; double filter cleaner bag; automatic air line vapor trap.

0960 Cleaner, Valve guide

Auto and Power Mechanics: advanced
Wire brush; twisted wire shank; 5/16", 11/32", 3/8", 7/16" diameters.

0965 Clutch Aligner (set)

Auto and Power Mechanics: advanced
Locks onto pilot bearing and leaves operator's hands free.

0970 Coil Winder

Electricity-Electronics: beginning, advanced
Capacity 22 to 40 gals.; wire with turns checker.

0975 Compass and Divider (set)

Drafting: beginning, advanced
General Shop
Includes large 6 1/2", rapid action, bow compass with lengthening bar to draw circles up to 11" diameter; 6", hairspring, friction-head divider with straightening device; both instruments to be flat type, nickel-silver, chrome plated.

0980 Compass, Beam

Drafting: beginning, advanced

24"; nickel-silver; chrome plated; with appropriate bars; coupler; micrometer adjustment needle center; pencil and pen needle point.

0985 Compass, Chalkboard

Drafting: beginning, advanced

General Shop

16" minimum length; metal or wood; friction joint; elbows; rubber tip; collet lock for chalk and tip.

0990 Compass, Drop bow

Drafting: advanced

4" drop bow compass; with interchangeable pen and pen points; German silver with tempered stainless steel needle point.

0995 Compass, Pencil

Elementary

General Shop

Woodworking: beginning, advanced

With or without graduated protractor.

1000 Composing Stick (6")

General Shop

Graphic Arts: beginning, advanced

Two piece stick equipped with a smooth finish knee; sets to picas and nonpareils; 4 teeth on the knee fit into rectangular slots in the rear wall of the body; 2"W; 6"L; graduated to 22 picas.

1005 Composing Stick (10")

General Shop

Graphic Arts: beginning, advanced

Two piece stick equipped with a smooth finish knee; sets to picas and nonpareils; 4 teeth on the knee fit into rectangular slots in the rear wall of the body; 2"W, 10"L; graduated to 46 picas.

1010 Composing Stick (12")

Graphic Arts: beginning, advanced

Two piece stick equipped with a smooth finish knee; sets to picas and nonpareils; 4 teeth on the knee fit into rectangular slots in the rear wall of the body; 2"W, 12"L; graduated to 58 picas.

1015 Composing Stick (15")

Graphic Arts: beginning, advanced

Two piece stick equipped with a smooth finish knee; sets to picas and nonpareils; 4 teeth on the knee fit into rectangular slots in the rear wall of the body; 2"W, 15"L; graduated to 73 picas.

1020 Composing Stick, Micrometer knee (10")

Graphic Arts: beginning, advanced

Two piece stick with a smooth finish knee; micrometer screw for instant setting to picas, nonpareils, and fractions of a point; 2"W, 10"L; graduated to 46 picas.

1025 Compressor, Air

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Electricity-Electronics: beginning, advanced

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Woodworking: beginning, advanced

120 p.s.i.; 1 stage; tank mounted; 1½ HP, 3-phase, 208V motor; 60 gallon tank; safety valve; drain cock; automatic pressure control; beltguard; pressure gauge; 4.5 cu. ft. per min. delivered output at rated pressure.

(Note: This compressor not suitable for operating automotive hoist.)

1030 Compressor, Piston ring (set)

Auto and Power Mechanics: beginning, advanced

General Shop

Capacity 1 ⅜" to 7"; bands of high spring steel; self locking heavy duty ratchet pawl; double friction brake adjustment.

1035 Compressor, Valve spring

Auto and Power Mechanics: beginning, advanced

General Shop

Valve spring lifter; parallel jaws; scissor action; upper and lower jaws adjustable; heavy duty construction; lock to hold positively at any height;

or: Clamp type valve lifter; universal type for ⅞" to 2½" spring diameters; with accessories (jaw extensions, etc.); for use on cars, trucks; L-head and valve-in-head engines; heavy duty.

Container, Benzene (1 quart) (see: Can, Safety—0720)

Container, Benzene (1 gallon) (see: Can, Safety—0725)

Container, Benzene (5 gallon) (see: Can, Safety—0728)

1060 Container, Plaster

Plastics: beginning, advanced

100 lb. capacity; metal or plastic, with covers.

1065 Countersink Bit (for brace) (set)

Elementary

General Shop

Metalworking: beginning

Plastics: beginning, advanced

Woodworking: beginning, advanced

Sizes: ⅝" and ¾".

1070 Countersink, High speed

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning

Woodworking: beginning, advanced

1/4" shank; 1/2" size.

1075 Crane, Portable

Auto and Power Mechanics: advanced

2 ton capacity; hydraulic; double action pump; adjustable, 3 position beam; with chain and hook.

1080 Creaser, Adjustable edge

General Shop

Hardwood handle; width of crease regulated by thumb screw.

1085 Creeper

Auto and Power Mechanics: beginning, advanced

Padded headrest; 3 1/4" angle axle casters; 16"W x 36"L.

1090 Crimping Tool

Electricity-Electronics: beginning, advanced

Crimps various solderless wire terminals. Available with wire cutters and strippers combined. Shears machine screws without damage to threads.

1095 Crucible (#4)

Metalworking: beginning, advanced

Silicon carbide.

1100 Crucible (#10)

Metalworking: beginning, advanced

Silicon carbide.

1110 Crucible Hand Shank (#10)

Metalworking: beginning, advanced

One-man; for #10 crucible.

1112 Crucible Hand Shank (#4)

Metalworking: beginning, advanced

One-man; for #4 crucible.

1115 Crucible Lifter

Metalworking: beginning, advanced

Two-man; #1 for #8, #10, #12 crucible.

1120 Crucible Ring Shank

Metalworking: beginning, advanced

Two-man; for #8, #10, #12 crucible.

1125 Crusher, Jaw (laboratory model)

Ceramics: advanced

- 1130 Curve, Irregular (set)**
 Drafting: beginning, advanced
 General Shop
 Transparent, professional quality, non-discoloring plastic irregular curve set; 8 curves; .060 thick; sizes 8, 10, 12, 13, 15, 16, 18, 20.
- 1135 Curve, Rule (adjustable)**
 Drafting: advanced
 Adjustable curve rule with square lead-bar sliding between steel ribbons; parts covered with rubber with rounded ruling edges; will bend to 1½" circle and larger; 31" in length.
- 1140 Cutter, Bolt**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Minimum 14"; ⅜" soft bolt capacity; cutting jaws hardened steel, replaceable.
- 1145 Cutter, Bushing**
 Auto and Power Mechanics: advanced
 For splitting soft metal bushings; 7/16" x 3/16" bit; ½" stock; 7" long chip curler to push metal away from work.
- 1150 Cutter, Glass**
 Elementary
 General Shop
 Woodworking: beginning, advanced
- 1155 Cutter, Lead and slug**
 General Shop
 Graphic Arts: beginning, advanced
 Settings from a nonpareil to 106 picas; self locking gauge.
- 1160 Cutter, Linoleum (set)**
 Elementary
 General Shop
 Graphic Arts: beginning, advanced
 Push-type cutters; set of 5 assorted cutters and handle.
- 1165 Cutter, Linoleum (set)**
 Elementary
 Pull-type cutters; set of 5 assorted cutters and handle.
- 1170 Cutter, Milling Machine, End (set)**
 Metalworking: advanced
 High speed steel; actual type and size to be specified according to need and machine size.

- 1175 Cutter, Milling Machine, Gear tooth, Involute (set)**
 Metalworking: advanced
 High speed; diametral pitch and number of cutter forms to be specified according to need.
- 1180 Cutter, Milling Machine, Helical, Plain**
 Metalworking: advanced
 High speed steel; diameter, width of face and arbor hole to be specified according to need.
- 1185 Cutter, Milling Machine, Shell and arbor**
 Metalworking: advanced
 High speed steel; actual sizes and types to be specified according to need and machine size.
- 1190 Cutter, Milling Machine, Slitting saw**
 Metalworking: advanced
 High speed steel; diameter, thickness, arbor hole and number of teeth to be specified according to need.
- 1195 Cutter, Muffler**
 Auto and Power Mechanics: advanced
 Adjustable 1½" to 2½"; 4 cutting wheels; threaded shaft adjustment.
- 1200 Cutter, Paper**
 Drafting: beginning, advanced
 General Shop
 Graphic Arts: beginning, advanced
 24"; scoring every ½ inch on hardwood surface; top and bottom scale; removable, self-sharpening blade of hardened tool steel; slide guide; safety spring to prevent handle from flying up or dropping.
- 1205 Cutter, Pipe**
 Auto and Power Mechanics: advanced
 Metalworking: advanced
 Capacity ⅛" to 1" diameter; 2 rollers; reamer blade; replaceable cutter blade.
Cutter, Plug (see: Bit, Plug cutter (set) #0330)
- 1210 Cutter, Round corner**
 Graphic Arts: beginning, advanced
 Pedestal model; foot operated; 2½" capacity; adjustable 45° angle gauge; includes 1 each #2, #1, #0, #00 knives.
- 1215 Cutter, Sprue**
 Metalworking: beginning, advanced
 ¾" x 10".

- 1220 Cutter, Tubing**
Auto and Power Mechanics: beginning, advanced
General Shop
 $\frac{1}{8}$ " to 1" capacity.
- 1225 Cutting-Off Tool, Lathe**
Metalworking: beginning, advanced
Straight shank; with beveled cutter and wrench.
- 1230 Densitometer, Photo**
Graphic Arts: advanced
Logarithmic scale meter; blue probe; set of 5 measuring apertures; 110V.
- 1235 Desk, Teacher's**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Approximately 42" x 30" x 29"H; welded steel construction; single pedestal with file drawer and tool drawer both lockable. Top drawer extends across front and is reference drawer approximately 24" x 36" x $2\frac{3}{8}$ " deep. Desk top can be heavy duty linoleum with stainless steel or aluminum edging or can be laminated plastic with laminated plastic edging.
- 1240 Desk, Teacher's standing**
Drafting: beginning, advanced
Approximately 36" x 26" x 42"H at front, 53"H at back; welded steel construction; pigeonhole back; locking drawer at front; (use with instructor's stool #4610).
- 1245 Die, Dapping**
Metalworking: beginning, advanced
 $2\frac{1}{2}$ " cube; 21 spheres $\frac{3}{16}$ " to $2\frac{3}{16}$ ".
- 1250 Die, Letter (set)**
Auto and Power Mechanics: beginning, advanced
Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
General Shop
Graphic Arts: beginning, advanced

Metalworking: beginning, advanced
Woodworking: beginning, advanced
For hard surfaces; 3/16" character height.

1255 Die, Number (set)

Auto and Power Mechanics: beginning, advanced
Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Woodworking: beginning, advanced
For hard surfaces; 3/16" character height.

Dispenser, Automatic transmission oil (see: Funnel, Longspout, Automatic transmission #1670)

1260 Dispenser, Cellophane tape

Graphic Arts: beginning, advanced
Heavy duty; 72 yard roll capacity.

1265 Dispenser, Drafting tape

Drafting: beginning, advanced
For both portable and stationary application; cuts all kinds and widths of tape rolls up to 1 1/2"; fits both 3" and 1" cores; holds rolls up to 7 3/4" O.D.

1270 Dispenser, Gummed paper

Graphic Arts: beginning, advanced
Automatic moistener; dispenses 1/2" to 1 1/2" tape; rustproof construction.

1275 Display Board

Drafting: beginning, advanced
Aluminum frame: adjustable; chart hangers at top; cork composition; 48"W x 48" to 96"L with 96"L preferred if space permits.

1280 Divider, Blackboard

Drafting: beginning, advanced
Hardwood.

1285 Divider, Proportional

Drafting: advanced
7 1/2" or larger; direct reading for lines in ratios from 3:4 to 1:10 and for circles in ratios from 4 to 20; German silver.

1290 Divider Spring (4")

Metalworking: advanced
Solid nut; Yankee pattern.

- 1295 Divider Spring (6")**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Solid nut.
- 1300 Divider Spring (8")**
 General Shop
 Metalworking: advanced
 Solid nut.
- 1305 Divider, Wing**
 Electricity-Electronics: beginning, advanced
 Elementary
 Woodworking: beginning, advanced
 6"; steel; polished brass joints.
- 1310 Dolly, Body (set)**
 Auto and Power Mechanics: advanced
- 1317 Dowel Centers (pairs) (set)**
 Woodworking: beginning, advanced
 1/4", 5/16", 3/8", 1/2".
 Dowelling Jig (see: Jig, Dowelling #2245)
 Drafting set (see: Compass and Divider (set) #09)
- 1320 Dresser, Abrasive wheel**
 Auto and Power Mechanics: beginning, advanced
 Elementary
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Diamond or hooded Huntington-type with extra star cutters. (Must conform to ASA standards.)
- 1325 Drill, Blacksmith (set)**
 General Shop
 High speed; 1/2" shank; sizes 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1".
- 1330 Drill, Electric, Portable (1/4")**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Key type chuck; ball thrust bearing; no load speed, approximately 2000 RPM (or variable speed); complete with 3-wire cord and plug; 120V; heavy duty; pistol grip with switch built-in.

1335 Drill, Electric, Portable ($\frac{3}{8}$ ")

Auto and Power Mechanics: beginning, advanced

Metalworking: advanced

Heavy duty; 115V; 3 amp; side arm; needle thrust bearings; RPM (1000—no load) (650—load); 3 jaw keyed chuck; pistol grip with switch built-in; three wire cord and plug.

1340 Drill, Electric, Portable ($\frac{1}{2}$ ")

Auto and Power Mechanics: advanced

Metalworking: advanced

Heavy duty; 115V; 3 amp; side arm; needle thrust bearings; RPM (1000—no load) (650—load); 3 jaw keyed chuck; pistol grip with switch built-in; three wire cord and plug.

1350 Drill, Hand ($\frac{1}{4}$ ")

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Solid grey-iron wide flange gear and 2 steel pinions; machine cut teeth; 3 jaw chuck; steel frame; hardwood handle and gear knob.

1355 Drill, Hand ($\frac{3}{8}$ ")

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Solid grey-iron wide flange gear and 2 steel pinions; machine cut teeth; 3 jaw chuck; steel frame; hardwood handle and gear knob.

1360 Drill Stand, Fractional

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

For twist drills from 1/16" to 1/2" by 64ths.

1365 Drill, Twist (letter set)

Electricity-Electronics: beginning, advanced

Metalworking: beginning, advanced

High speed steel; straight shank; letter set A to Z.

1370 Drill, Twist (number set)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

High speed steel; straight shank; numbers 1 to 60; wire gauge.

1375 Drill, Twist, Straight shank (fractional set)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

High speed steel; by 64ths from 1/16" to 1/2".

1380 Drill, Twist, Taper shank (fractional set)

Metalworking: beginning, advanced

High speed; #2 Morse Taper Shank; 5/8" to 1" by 8ths.

1385 Dry Press

Ceramics: beginning, advanced

Table model. Overall 15"H x 9"D x 7 1/2"W. Chromium plated frame. Pressure up to approximately 1 ton by adjusting bar handle. Steel die for 1" disc supplied. Wt. 25 lbs.

1390 Dry, Print

Graphic Arts: beginning, advanced

Rotary type; constant temperature; 12" x 18" chrome plated surface; 110V. Three wire cord and plug.

1395 Duplicating Machine, Spirit

Graphic Arts: advanced

Maximum sheet size 8 1/2" x 14"; electrically operated; 110V; 250 sheet feed capacity.

1400 Duplicating Machine, Stencil

Graphic Arts: advanced

Paper size 8½" x 14" maximum; electrically operated; 110V; 90 copies per minute; with counter.

1405 Dust Collection System

Woodworking: beginning, advanced

Beginning: Minimum capacity of 500 C.F.M., outside vented, self-contained for installation within laboratory. Minimum motor H.P. of 1/3.

Two storage drums with "Y" diverting duct arrangement.

Advanced: Self-contained unit consisting of a medium efficiency low pressure drop centrifugal precleaner and a Dynamic Precipitator of the combined exhaustor and dust separator type driven by a 10 HP totally enclosed ball bearing 1800 RPM motor and base for 220/60/3 service. Assembly to be Type D Roto-Clone with Skimmer Precleaner including combination dust storage hoppers. Capacity: not less than 4600 cu. ft. of free air per minute against not less than 6.0 inches water gauge total external pressure when operated at approximately 1000 RPM under which conditions the total power required shall not exceed 8.4 brake horsepower. Ducts from fan to equipment shall be built on the site.

1410 Electricity Demonstration Panel, Teacher's

General Shop

Designed for use by instructors in lecture demonstrations or by students in performing laboratory experiments; panels or boards each covering one of wide range of subjects (i.e. magnetism, Ohm's law, series and parallel circuits, etc.) providing a series of experiments to demonstrate the subject.

1415 Electricity Training Panel, Student's

General Shop

For use by students conducting laboratory experiments; components complement those used in instructor's panel.

1420 Electronics Demonstration Panel, Teacher's

General Shop

Designed for use by instructors in lecture demonstrations or by students in performing laboratory experiments; panel or board each covering one of wide range of subjects (i.e. inductance transistor oscillator, vacuum tube receivers, etc.) providing a series of experiments to demonstrate the subject.

1425 Electronics Training Panel, Student's

General Shop

For use by students conducting laboratory experiments; components complement those used in instructor's panel.

1430 Electroplating Unit

Metalworking: beginning, advanced

50 amps; 0-9 volts.

- 1435 Engine, Automobile**
Auto and Power Mechanics: beginning, advanced
Used overhead valve, 6-cylinder internal combustion engine; with transmission and clutch in running condition.
- 1440 Engine, Diesel**
Auto and Power Mechanics: beginning, advanced
Small, 100 HP or less; 4-cylinder; 2-cycle
- 1445 Engine, Outboard motor**
Auto and Power Mechanics: beginning, advanced
Local purchase.
- 1450 Engine, Rocket (small or model)**
Auto and Power Mechanics: advanced
- 1455 Engine, Small (2-cycle)**
Auto and Power Mechanics: beginning, advanced
General Shop
Single cylinder; 2-cycle; 2.5 HP; air cooled; vertical shaft; cast iron block (custom) or aluminum alternate.
- 1460 Engine, Small (4-cycle)**
Auto and Power Mechanics: beginning, advanced
General Shop
Single cylinder; 4-cycle; air cooled; horizontal shaft; cast iron or aluminum block; heavy flywheel; vacu-jet carburation.
- 1465 Engine, Steam (model)**
Auto and Power Mechanics: advanced
Model of typical mill engine with boiler; engine is 8½"L, 7 lbs., with stroke of 1¼", bore of ⅝"; boiler has working pressure of 60 lbs., brazed copper drum with 2 circulating tubes and superheater, cast iron front and back plates, asbestos lining, water gauge, safety valve and steam valve.
- 1470 Engine, Turbine (small)**
Auto and Power Mechanics: beginning, advanced
- 1475 Enlarger, Photographic**
Graphic Arts: beginning, advanced
Condenser model for negative size 4" x 5" and smaller. Condenser system should be variable; filter drawer provision; lens and lens mounts for 135mm, 90mm, 50mm; negative carriers for 4" x 5", 2¼" x 3¼", 120 film and 35mm film.
- 1480 Eraser Shields**
Drafting: beginning, advanced
General Shop
Stainless steel; polished finish; with 20 various openings; free from burrs and sharp edges; size 2½" x 3¾" x .005"T.

1485 Erasing, Machine, Electric

Drafting: advanced

110-115 volt; 2400-3400 RPM erasing speed; AC electric erasing machine with 84" cord, off-on switch; retractable hanger with assortment of 4 eraser refills.

1490 Exposure Frame

Graphic Arts: advanced

14" x 19" capacity; photo-flood bulb; automatic timer; 110V.

1495 Extension Cord

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Heavy duty; grounded; 25'.

Extension, Socket wrench, Flexible handle (see: Wrench, Socket, Flex handle #5375-#5380)

Extension, Socket wrench handle (see: Wrench, Socket, Handle extension #5385-#5410)

1500 Extractor, Screw (set)

Auto and Power Mechanics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Set of 6, #1 to #6. Tapered ends with left hand twist which draws extractor into stud as it is removed; square shaft permitting the use of a wrench; one each $\frac{1}{8}$ ", $\frac{9}{64}$ ", $\frac{7}{32}$ ", $\frac{5}{16}$ " screw extractors; kit bag.

1505 Extruder, Large

Plastics: advanced

Minimum capacity 2"; take-off and cooling equipment; dies for sheeting and other shapes; blown film tower; 220-440V, 3-phase operation.

1510 Extruder, Medium

Plastics: beginning, advanced

Capacity 1" to 1 $\frac{1}{2}$ "; take-off and cooling equipment; dies for sheeting and other shapes; 220-440V, 3-phase operation.

1515 Extruder, Small

Plastics: beginning, advanced

Capacity $\frac{3}{4}$ "; take-off and cooling equipment; dies for sheeting and other shapes; 110-220V, single-phase operation.

1520 Extrusion, Machine, Auger type

Ceramics: beginning, advanced

De-airing extruder, auger-type; easily dismantled and cleaned; special dies are available.

1525 Eyelet Setter

Elementary

General Shop

Knurled handle; for setting eyelets in leather.

1530 Ferrottype Plate

Graphic Arts: beginning, advanced

Chrome plated; 10" x 14".

1535 Fid

General Shop

Hardwood handle; 2 $\frac{1}{4}$ "L blade; for enlarging punch hole.

1540 Files (assorted sizes, shapes, and cuts, with handles, as specified)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

<u>Area</u>	<u>Quantity</u>	<u>Length</u>	<u>Name or Shape</u>	<u>Spacing</u>
Auto and Power Mechanics	2	10"	Half-round	Smooth
	6	10"	Half-round	Bastard
	3	10"	Lathe (Long Angle, Safe Edge)	
	3	10"	Brass (Flat)	
	2	10" x $\frac{3}{8}$ "	Round	Bastard
	2	8" x $\frac{1}{4}$ "	Round	Bastard
	2	10" x $\frac{3}{8}$ "	Square	Bastard
	3	6"	Slim Taper (Triangular)	
	2	8"	Warding	
	3	10"	Flat	Second-Cut Bastard

Electricity-Electronics	6	10"	Half-round	Bastard
	6	10"	Round	Bastard
	3	10"	Aluminum (Flat)	
	4	6"	Mill	Second-Cut
	4	6"	Half-round	Second-Cut
Elementary	12	8"	Cabinet (Half-round)	
	6	8"	Mill	Second-Cut
	6	8"	Square	Second-Cut
General Shop (general metals)	6	8"	Round	Second-Cut
	2	8"	Flat	Bastard
			Double-Cut	
	2	10"	Flat	Bastard
			Double-Cut	
	2	6"	Half-round	Bastard
	2	8"	Half-round	Bastard
	2	10"	Half-round	Bastard
	2	8"	Half-round	Second-Cut
	2	10"	Half-round	Second-Cut
	2	8"	Mill	Second-Cut
	2	10"	Mill	Second-Cut
	2	8"	Rat-tail (Round, Slim)	Second-Cut
	2	8"	Round	Second-Cut
	2	10"	Round	Second-Cut
	2	6"	Slim, Taper Single-Cut	
	2	8"	Square	Second-Cut
	2	8"	Square	Smooth
	2	10"	Vixen (Half-round)	
	2	8"	Wood (Flat)	Coarse
Metalworking	2	10"	Wood (Flat)	Coarse
	2	8"	Cabinet (Half-round)	
	2	10"	Cabinet (Half-round)	
	2	8"	Cabinet	Bastard
			Rasp (Half-round)	
	2	10"	Cabinet	Bastard
			Rasp (Half-round)	
	2	6"	Slim, Taper Single-Cut	
	4	8"	Flat	Bastard
			Double-Cut	
	4	10"	Flat	
			Double-Cut	Bastard

	6	4"	Mill	Smooth
	6	6"	Mill	Smooth
	6	8"	Mill	
	2	6"	Round	Second-Cut
	6	8"	Round	Bastard
	4	8"	Three-Square (Triangular)	Second-Cut
Plastics	6	10"	Mill	Second-Cut
	6	10"	Mill	Bastard
	6	10"	Half-round	Second-Cut
	6	10"	Half-round	Bastard
	6	8"	Round	Second-Cut
	6	8"	Round	Bastard
	6	6"	Warding	
	3	10"	Cabinet	Second-Cut
Woodworking			Rasp	
	3	7"	Slim, Taper (Triangular)	
			Single	
	6	10"	Half-round	
			Rasp	
	6	10"	Round	
			Rasp	
	12	10"	Cabinet	
			Double-Cut (Half-round)	

- 1545 File, Auger bit**
 General Shop
 Woodworking: beginning, advanced
 7-inch; standard cut.

File, Auto body (set) (see: Body-Fender Tools #0395)

- 1550 File Card and brush**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Graphic Arts: beginning, advanced
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 9½"L; brush 1½" x 5".

- 1555 File, Drafting**
 Drafting: advanced
 Flat cap; two 5-drawer units; inside dimensions to accommodate 36" x 48" drawing sheets; flush base with partitions between drawers.

File Handles (see: Files, #1540. Sizes and number determined by quantity and size of file specified)

- 1560 File, Contact point (ignition)**
Auto and Power Mechanics: beginning, advanced
Double-cut; 2½" blade.
- 1565 File, Jeweler's (set)**
Electricity-Electronics: beginning, advanced
Assorted shapes; 4" to 6".
- 1570 File, Needle (set)**
Electricity-Electronics: beginning, advanced
Elementary
Plastics: beginning, advanced
Set of 12; 5½"L; assorted shapes; (1 each: Marking, Joint, Barrette, Slitting, Square, Three-square, Flat, Oval, Knife, Round, Half-round, Equaling).
- File, Rasp (see: Files # 1540)**
- 1575 File, Swiss pattern (set)**
General Shop
12 assorted.
- File, Wood (see: Files # 1540)**
- 1580 Filter, Photo (set)**
Graphic Arts: advanced
For variable contrast photographic paper; should include filters for equivalent paper grades of 1 through 4 by half steps.
- 1585 Filter Press (laboratory model)**
Ceramics: advanced
Fitted for filling by air pressure from air tank. Has 10 chambers 9" square, will deliver 30 lbs. of clay per pressing.
- 1590 Finishing Rubber**
Ceramics: beginning, advanced
Kidney shapes of pliable rubber; for smoothing and finishing pottery; for screening glaze; sizes # 1, 2⅛" x 3½"; size # 2, 2" x 4¼".
- 1592 Fire Blanket**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced

1593 Fire Extinguisher

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

5 lb. capacity UL rated 8 BC—used on all B and C fires. Acceptable for grease electrical fires, and chemical fires.

(First aid—For Class A, B, and C fires.) Carbon dioxide for electric, grease and flammable liquid fires; 5 lb., 10 lb., 15 lb., or 20 lb. capacity; 5 lb. size UL rated 4 BC; complete with wall hanger. Pressurized water—2½ gal.; UL rated 2A; air-pressurized to 100 p.s.i.; stainless steel shell; pressure gauge; squeeze grip release handle; needs no annual recharge service; 24 ¾"H x 7" diameter; with charge to prevent freezing; complete with hanger. Dry chemical—2¾ lb.; UL rated 6 BC; pressure gauge at top shows action readiness; one hand operation; protection against all B & C fires; Coast Guard approved; complete with bracket. Dry chemical—5 lb. capacity; UL rated 8 BC; for electric and flammable liquid fires; complete with wall hanger.

1595 Firing Racks

Ceramics: beginning, advanced

Heat resistant; 4 mesh ni-chrome; for transporting work in and out of kiln; all racks are supplied flat; 3 sizes: 3" x 3", 6" x 6", 12" x 12".

1600 First Aid Kit

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

To be purchased where state laws allow. Standard insurance kit recommended including common supplies and First Aid Manual. Local and state regulations should be checked.

- 1605 Flaring Tool (set)**
 Auto and Power Mechanics: advanced
 General Shop
 Range 3/16" to 5/8"; tapered hardened cone riding on ball bearing.
- 1610 Flask, Foundry (large)**
 Metalworking: beginning, advanced
 12" x 18"; cope 4" deep, drag 4" deep.
- 1615 Flask, Foundry (small)**
 General Shop
 Metalworking: beginning, advanced
 Plastics: advanced
 10" x 12"; cope 3" deep, drag 3" deep.
- 1620 Flocking Gun**
 Elementary
 Spray gun.
- 1625 Flywheel Holder**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 For small gas engines.
- 1630 Folding Machine**
 Graphic Arts: advanced
 Paper size 2 1/4" x 4" to 9 1/2" x 15"; complete with slitter, scorer and perforator.
- 1635 Forge, Gas**
 General Shop
 Metalworking: advanced
 With blower; swinging adjustable refractory lid; solenoid safety valve; limiting orifice.
- 1640 Fork, Enameling**
 General Shop
 17 1/2" L.
- 1645 Fork, Firing**
 Ceramics: beginning, advanced
 Sturdy heavy gauge firing fork with wooden handle. 20" L; wt. 6 oz.
- 1650 Forming Roll, Slip**
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 30"; capacity mild steel: 22 gauge.

- 1655 Fountain Pen (technical set)**
 Drafting: advanced
 General Shop
 Non-clogging; seven point sections, sizes 00, 0, 1, 2, 2½, 3, 4; re-usable ink cartridges; with holder, case, and ink filler bottle; possible to disassemble for cleaning.
- 1660 Frame, Printing**
 Drafting: advanced
 For exposures by sunlight; to accommodate 17" x 22" drawings.
- 1665 Funnel**
 Woodworking: beginning, advanced
- 1670 Funnel, Longspout, Automatic transmission**
 Auto and Power Mechanics: advanced
 Spring loaded button to control fluid flow; punch spout for opening and pouring oil cans; 23½"L; 4½" flexible cable hose.
- 1675 Furnace, Bench**
 General Shop
 Metalworking: beginning, advanced
 Gas; two-burner; refractory lined hood; pilot light; shut-off valve; front baffle.
- 1680 Furnace, Crucible**
 Ceramics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Plastics: advanced
 Maximum capacity # 16 crucible; temperature range 1200-2300°F; with blower, spark ignition, gas pressure regulator, safety gas-check valve and limiting orifice.
- 1685 Furnace, Heat treating**
 Metalworking: beginning, advanced
 Beginning: Firebox 5"H x 7¾"W x 13"L; temperature range 1300 to 2400° F; blower; pressure regulator; limiting gas orifice; pilot; gas-check valve.
 Advanced: Firebox 7"H x 13"W x 16½"L; temperature range 1300° to 2350° F; blower; pressure regulator; limiting gas orifice; pilot; gas-check valve.
- 1690 Furniture, Wood, Fonts**
 General Shop
 Graphic Arts: beginning, advanced
 Standard labor-saving font for lock-up in cabinet; sizes should include widths 2-3-4-5-6-8-10 picas; lengths 10-15-20-25-30-40-50-60 picas.

- 1695 Galley (10" x 16")**
 Graphic Arts: advanced
 Uniform gauge; rustproof; welded corners.
- 1700 Galley (8 $\frac{1}{4}$ " x 13")**
 General Shop
 Graphic Arts: advanced
 Uniform gauge; rustproof; welded corners.
- 1705 Galvanometer**
 Auto and Power Mechanics: advanced
 DC; 50-0-50 scale; 2 $\frac{1}{2}$ " or 3 $\frac{1}{2}$ " model; sensitivity microamperes
 500-0-500 or 75-0-75; resistance 46 or 2000 ohms.
- 1710 Gauge, Auger bit**
 Ceramics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Graphic Arts: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 For gauging hole depth.
- 1715 Gauge, Belt Tension**
 Auto and Power Mechanics: beginning, advanced
 Die cast frame; easy to read tension gauge dial 40-135 lbs.
- 1720 Gauge, Carburetor (set)**
 Auto and Power Mechanics: advanced
- 1725 Gauge, Center**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 For use with screw-cutting lathe tools. Spring tempered.
- 1730 Gauge, Cylinder pressure**
 Auto and Power Mechanics: beginning, advanced
 General Shop
Auto and Power Mechanics: Universal compression tester adaptable
 for hard to reach places; gauge range 0-300 p.s.i.; quick disconnect
 fittings; complete with hose.
General Shop: Compression tester; gauge range 0-300 p.s.i.; 360°
 rotating stem.
- 1735 Gauge, Depth rule**
 General Shop

- 1740 Gauge, Draw**
Elementary
Hollow handle; for cutting leather strips.
- 1745 Gauge, Drill, Fractions**
Auto and Power Mechanics: beginning, advanced
Woodworking: beginning, advanced
Jobber's drill plate; range 1/16" to 1/2" by 64ths; case hardened steel.
- 1750 Gauge, Drill, Number**
Auto and Power Mechanics: beginning, advanced
Range: 80—0; case hardened steel.
- 1755 Gauge, Drill point**
Metalworking: advanced
Consisting of a six-inch hook rule graduated in 8ths, 16ths, 32nds, and 64ths, in combination with a sliding head which can be positioned on rule and locked; head beveled to 59°; head graduated in 32nds along 59° face.
- 1760 Gauge, Ignition (set)**
Auto and Power Mechanics: beginning, advanced
General Shop
- 1765 Gauge, Line (12")**
General Shop
Graphic Arts: beginning, advanced
Stainless steel; etched 6 and 12 point graduations on one side; agate and inches on other side.
- 1770 Gauge, Line (18")**
Graphic Arts: beginning, advanced
Brass; 6 and 12 point one side; agate and inches on other side.
- 1775 Gauge, Marking**
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
- 1780 Gauge, Marking (double bar)**
Woodworking: beginning, advanced
- 1785 Gauge, Micrometer, Depth**
Metalworking: advanced
Calibrated thousandths; 0 to 3".
- 1790 Gauge, Pin (sets)**
General Shop
Graphic Arts: beginning, advanced
Spring tongue.

- 1795 Gauge, Radius and fillet**
 Metalworking: advanced
 With radii from $1/32''$ to $17/32''$ by 64ths.
- 1800 Gauge, Screw pitch**
 Auto and Power Mechanics: advanced
 Drafting: advanced
 Electricity-Electronics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Woodworking: beginning, advanced
 With 22 pitches from 9 to 40.
- 1805 Gauge, Small hole**
 Metalworking: advanced
 Set of four: from $1/8''$ to $1/2''$.
- 1810 Gauge, Spark plug**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 $1\frac{3}{4}''$ fingers; .010, .012, .013, .015, .018, .020, .022, .024, .026, .028, .030, .032, .035.
- 1815 Gauge, Spring tension**
 Auto and Power Mechanics: beginning, advanced
 One to be used in conjunction with a torque wrench; will test valve and clutch springs; one brake spring tester.
- 1820 Gauge, Surface**
 Auto and Power Mechanics: advanced
 Metalworking: advanced
 Base $3\frac{1}{8}'' \times 2\frac{1}{2}''$; hardened; two spindles, 9" and 12"; spindle swivels to any position from vertical to horizontal; with scribe.
- 1825 Gauge, Telescopic**
 Metalworking: advanced
 Set: $1/2''$ to 6".
- 1830 Gauge, Thickness ("feeler")**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 General Shop
 Minimum 6 leaf; $1/2'' \times 2\frac{1}{2}''$; .0015 to .015.
- 1835 Gauge, Tire pressure**
 Auto and Power Mechanics: beginning, advanced
 Easy to read; pencil type; calibrated 4 to 50 lbs. in one lb. units.

- 1840 Gauge, Type high**
Graphic Arts: beginning, advanced
Standard for letterpress printing (0.918").
- 1845 Gauge, Vacuum and low pressure**
Auto and Power Mechanics: beginning, advanced
Vacuum seal up to 28"H; pressure scale up to 10 p.s.i.; plus 11
adaptors; in metal box.
- 1850 Gauge, Vernier height**
Metalworking: advanced
Minimum 0 to 12"; offset arm to permit measurement from 0 over full
range; base slotted to provide clearance for arm and to increase
stability.
- 1855 Gauge, Wire and sheet metal (American)**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
American Standard; sizes 0 to 36; with decimal for each number
stamped on back.
- 1860 Gauge, Wire and sheet metal (U.S.S.)**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
U.S. Standard; sizes 0 to 36; with decimal for each number stamped
on back.
- 1865 Gear Puller**
General Shop
For small gas engines.

- 1870 Geometric Shapes (set)**
 Drafting: advanced
 Variety of plane and solid geometric figures; of hardwood; in suitable container.
- 1880 Gloves, Asbestos (pair)**
 Elementary
 General Shop
 Metalworking: beginning, advanced
 Unlined; 14"L; medium size.
- 1885 Gloves, Leather (pair)**
 Auto and Power Mechanics: advanced
 General Shop
 Metalworking: beginning, advanced
 Woodworking: beginning, advanced
 Cowhide; for welders.
- 1890 Gloves, Thin rubber (pair)**
 Elementary
 Thin latex.
- 1892 Gloves, Thick rubber (pair)**
 Graphic Arts: beginning, advanced
 Metalworking: beginning, advanced
- 1895 Glue Pot**
 Graphic Arts: beginning, advanced
 110V; automatic temperature control; 1 qt. copper insert.
- 1900 Goggles, Spectacles, Clear observation**
 Auto and Power Mechanics: beginning, advanced
 Ceramics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Graphic Arts: beginning, advanced
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Must meet ASA Z2.1 1959 code; side shields included.
- 1905 Goggles, Gas welding**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 (Must conform to ASA standards.)

- 1910 Goggles, Melter's**
General Shop
Composition cups with indirect ventilation; adjustable chain bridge; 1-piece adjustable elastic headband; with melter blue lens, or clear lens. (Approved and exceed ASA Spec Z2.1-1959.)
- 1915 Graduate Cylinder (100cc)**
Ceramics: beginning, advanced
Plastics: beginning, advanced
- 1920 Graduate Cylinder (500cc)**
Ceramics: beginning, advanced
Plastics: beginning, advanced
- 1925 Graduate, Darkroom**
Graphic Arts: beginning, advanced
Conical type; 16 oz. capacity; graduated in both English and metric systems.
- 1930 Grease Gun**
Auto and Power Mechanics: beginning, advanced
Graphic Arts: beginning, advanced
Woodworking: beginning, advanced
Hand operated; loaded through filler valve or directly into barrel; corrosion resistant finish; approximately 15"L, with plunger; 1 lb. capacity; with hydraulic fitting; flex hose.
- 1935 Grease Gun, Chassis**
Auto and Power Mechanics: advanced
(Chassis Lubricator) Including 45:1 ratio pump, 6', 1/4" 1D pressure hose; "Z" type swivel pressure regulator valve; 360° swivel adapter; air line coupler; follow plate dolly assembly; baked enamel finish; will dispense from 25, 35, and 50 lb. pails.
- 1940 Grease Gun, Extended interval**
Auto and Power Mechanics: advanced
Grease gun with adapters for late model cars designed for extended interval servicing; with 12" hose.
- 1945 Grease Gun, Gear Lube**
Auto and Power Mechanics. advanced
Hand operated fast acting pump delivering 3 oz. per stroke; 8 pint non-totalizing meter; 6', 1/4" 1D year lube hose and non-drip nozzle; portable caster base and shield pail cover.
- 1950 Grease Gun, Suction, General purpose**
Auto and Power Mechanics: beginning, advanced
For servicing oil filters, gear cases, transmissions, differentials, etc.; capacity 16 oz.; impervious rubber follower; zinc plated with flexible metal extension; 24"L.

1955 Grinder, Belt

Plastics: beginning, advanced

1½" W belt; 1 horsepower, 220V, 3-phase; magnetic switch guards; work rest. (Must conform to ASA standards.)

Grinder, Bench (see: Grinder, Edge tool (bench) #1965)

1960 Grinder-Buffer, Bench, Combination

Ceramics: beginning, advanced

Elementary

¼ HP; ball-bearing; 1725 RPM; 115V, AC; manual starter with overload protection, 8 #2 wire plus ground cord; double extension shaft for 6" grinder and rest and buffing attachments for polishing, complete with polishing kit; complete with switch, motor cord, and plug. (Must conform to ASA standards.)

1965 Grinder, Edge tool (bench)

Auto and Power Mechanics: beginning, advanced

Elementary

Plastics: beginning, advanced

Woodworking: beginning, advanced

1" x 7" model including one fine-grit and one coarse wheel; water pot; twin light safety shields; wheel guards; adjustable spark deflectors; tool rests; mounted switch with 3-prong plug; motor ½ HP, 60 cycles, 110V, with overload protection. Three-wire cord and plug. (Must conform to ASA standards.)

1970 Grinder, Flexible shaft

Auto and Power Mechanics: advanced

(Must conform to ASA standards.)

1975 Grinder, Heavy duty pedestal

Metalworking: advanced

12"; with self-contained dust collector; with tool tray and water pot, and wheels; 2 HP motor, 220V, 3-phase, 60 cycle; magnetic starter; grinder and fan motors to operate simultaneously. (Must conform to ASA standards.)

1980 Grinder, Oil tool

General Shop

Woodworking: beginning, advanced

Floor model complete with mounted switch, two 1½" x 6" oilstone wheels, one fine and one coarse, and a ½" x 8" emery dry wheel with tool rest and eye shield, grooved table with adjustable tool holder, two coolant tanks with flow controls. Motor ¼ HP, 110V, 60 cycles, single-phase, complete with conductor cord and plug. (Must conform to ASA standards.)

1985 Grinder, Pedestal

Auto and Power Mechanics: advanced

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

1" x 7" model including one fine-grit and one coarse wheel; water pot; twin light safety shields; wheel guards; adjustable spark deflectors; tool rests; mounted switch with 3-prong plug; motor 1/2 HP, 60 cycles, 110V, with overload protection mounted on cast iron floor pedestal. Three wire cord and plug. (Must conform to ASA standards.)

1990 Grinder, Surface

Metalworking. advanced

Minimum table working surface 13 1/2" x 6"; minimum longitudinal feed 14"; minimum cross feed 7"; work height 0" to 11 1/2"; vertical feed .0001"; cross feed .001"; 7" wheel; spindle motor 1 HP, 3450 RPM; hydraulic pump motor 1/3 HP; diamond dresser; table lock and stops; collet; wheel puller and spanner wrench. (Must conform to ASA standards.)

1995 Grinder, Valve (set)

Auto and Power Mechanics: advanced

General Shop

(Valve Refacer) For wet grinding valves 9/32-9/16 diameter stems; 1/3 HP, 115V, 60 cycle motor; position stop angle settings; valve stem and rocker arm grinding attachment; with cabinet and assortment of valve seat grinding stones, stove sleeves, pilots, etc.; portable unit. (Must conform to ASA standards.)

2000 Groover, Hand (set)

General Shop

Metalworking: beginning, advanced

Set of 3; sizes: 0, 2, 4.

2005 Growler, Armature testing

Auto and Power Mechanics: beginning, advanced

120V; 60 cycle; 2 scale meter; 2 ranges (0-5 amps; 0-25 amps); pilot lights test prods on separate transformers.

2010 Gun, Engine cleaning

Auto and Power Mechanic: beginning, advanced

(Hydro-Air Pressure Washer) Gun type with screw type adjustment; connects to air and water supply; rubber grip to protect from hot water; one siphoning attachment; extensions; one flush adapter tapered cone to fit openings 3/4" to 2 1/2" diameter openings.

Hammer, Auto body (set) (see: Body-Fender Tools #0395)

2015 Hammer, Ball peen (2 oz.)

Elementary

Polished face and peen.

- 2020 Hammer, Ball peen (4 oz.)**
 Auto and Power Mechanics: beginning, advanced
 Elementary
 General Shop
 Polished face and peen.
- 2025 Hammer, Ball peen (8 oz.)**
 Auto and Power Mechanics: beginning, advanced
 Metalworking: beginning, advanced
 Polished face and peen.
- 2030 Hammer, Ball peen (12 oz.)**
 Electricity-Electronics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Polished face and peen.
- 2035 Hammer, Ball peen (16 oz.)**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Polished face and peen.
- 2040 Hammer, Ball peen (30 oz.)**
 Metalworking: advanced
 Polished face and peen.
- 2045 Hammer, Ball peen (32 oz.)**
 Metalworking: advanced
 Polished face and peen.
- Hammer, Blacksmith's hand (see: Hammer, Engineer's #2090, #2095)**
- 2050 Hammer, Bookbinder's backing**
 Graphic Arts: beginning, advanced
 1 lb.; 12 oz. head; wooden handle.
- 2055 Hammer, Brass head**
 Auto and Power Mechanics: beginning, advanced
 1 lb.; 3"L; 1 1/4" diameter.
- Hammer, Bumping (see: Body-Fender Tools #0395)**
- 2060 Hammer, Chasing**
 Auto and Power Mechanics: advanced
 1"; with handle attached.

- 2065 Hammer, Chipping**
 Auto and Power Mechanics: advanced
 Elementary
 General Shop
 Metalworking: advanced
- 2070 Hammer, Claw (7 oz.)**
 Elementary
 General Shop
 Woodworking: beginning, advanced
 Curved claw; bell face; hickory handle.
- 2075 Hammer, Claw (10 oz.)**
 Elementary
 Curved claw; bell face; hickory handle.
- 2080 Hammer, Claw (13 oz)**
 Elementary
 General Shop
 Woodworking: beginning, advanced
 Curved claw; bell face; hickory handle.
- 2085 Hammer, Claw (16 oz.)**
 Auto and Power Mechanics: beginning, advanced
 Drafting: beginning, advanced
 Electricity-Electronics: beginning, advanced
 General Shop
 Graphic Arts: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Curved claw; bell face; hickory handle.
- 2090 Hammer, Engineer's (40 oz.)**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Cross peen; fully polished.
- 2095 Hammer, Engineer's (48 oz.)**
 Metalworking: beginning, advanced
 Cross peen; fully polished.
- 2100 Hammer, Forming**
 General Shop
 Assorted shapes; medium size.
- 2105 Hammer, Lead**
 Auto and Power Mechanics: beginning, advanced
 3 lb.; lead head; steel shank.

- 2107 Hammer, Magnetic**
Woodworking: beginning, advanced
Standard upholsterer's.
- 2110 Hammer, Raising**
General Shop
Polished faces.
- 2115 Hammer, Riveting, Machinist's**
General Shop
Metalworking: beginning, advanced
Fully polished.
- 2120 Hammer, Setting**
General Shop
12 oz.
- 2125 Hammer, Sledge**
Auto and Power Mechanics: advanced
5 lb.; medium length handle; seasoned hickory handle.
- 2130 Hammer, Soft face (4 oz.)**
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Replaceable plastic faces.
- 2135 Hammer, Soft face**
Auto and Power Mechanics: beginning, advanced
General Shop
With replaceable plastic faces.
- 2140 Helmet, Welding arc (hand type)**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: advanced
Plastics: advanced
With # 10 lens and cover. (Must conform to ASA standards.)
- 2145 Helmet, Welding arc (head type)**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Plastics: advanced
Molded fiberglass reinforced helmet; impervious to moisture and warping; removable nylon ratchet headgear; rounded underchin; lift-type front; shade #10. (Approved and exceed ASA Spec Z2.1-1959.)

2150 Hoist, Double post

Auto and Power Mechanics: beginning, advanced

Pistons in fixed position with minimum diameter of $7\frac{1}{2}$ "; pistons operated independently or in unison; fully hydraulic air-operated with low oil control for safety; flush floor model; height of rise 70'; capacity 8000 lbs. at 120 lbs. per sq. in. air pressure; controls mountable clear of hoist area; capable of handling passenger cars, foreign and domestic, as well as some small trucks; to be installed by supplier; all underground piping to be appropriately wrapped.

2155 Hoist, Single post

Auto and Power Mechanics: beginning, advanced

Piston diameter $10\frac{1}{2}$ "; semi-hydraulic air-operated with low oil control for safety; height of rise 66'; controls mountable clear of hoist area; capable of handling passenger cars foreign and domestic as well as some small trucks; to be installed by supplier; all underground piping to be appropriately wrapped.

2160 Hone, Brake cylinder (set)

Auto and Power Mechanics: beginning, advanced

Stones on free swinging self centering shoes; tension controlling screw; for $\frac{1}{2}$ " to 2" diameter cylinders; 2 medium grit stones; 2 fine grit stones.

2165 Hone, Cylinder (to 7")

Auto and Power Mechanics: advanced

(Glaze Breaker) range 2"- $5\frac{1}{4}$ " diameter; with 2—3" medium grit stones and felt wiper pad.

2170 Hone, Pin

Auto and Power Mechanics: advanced

2175 Hose, Air

Auto and Power Mechanics: beginning, advanced

Woodworking: beginning, advanced

25' x 14"; heavy duty; 2-braid carcass; flexible.

2180 Hose, Exhaust, Garage

Auto and Power Mechanics: beginning, advanced

100' only; $2\frac{1}{2}$ " diameter; 100% neoprene rubber; rugged spiral construction; withstanding temperatures -40 to +325 degrees Fahrenheit.

2185 Hose, Water

Auto and Power Mechanics: beginning, advanced

50'; garden type; heavy duty; 2-ply; with end fittings.

2190 Hot Plate, Electric

Elementary

Graphic Arts: beginning, advanced

Woodworking: advanced

100 V with thermostatic control switch.

2195 Hydraulic Instruction Unit

Auto and Power Mechanics: advanced

Bench 60" L x 23" D x 33" H, heavy steel top and frame with drain to rear, integral hydraulic reservoir, leveling screws, fitted interior, masterkeyed doors; instrument panel with 30 lb., 160 lb., and 400 lb. x 3 1/2" gauges, 30 second 1 revolution timer clock, toggle switch with pilot and duplex; pressure source with positive displacement pump, direct drive from 1/4 HP TEFC motor, filter, external relief valve, precision pressure control valve and 4 valve outlet manifold; component mounting; permanent plumbing of metal tubing and pipe; plumbing to be varied by students 1/4" and 3/8" plastic tubing with finger tightening fittings, color coded; power requirements: 120V 5A, with 3-wire cord and 6-rounded plug; 2—1 1/8" x 6" double acting cylinders; 1—1/2" x 3" double acting cylinder; weights, weight arm, and arm support; pressure switch; accumulator; 4-way manual valve; 2—unidirectional flow control valves; 3 wrenches; all necessary fittings, tubing, bolts, oil, etc.

2200 Hydrometer

Auto and Power Mechanics: beginning, advanced

(Anti-freeze Tester) Large colour coded charts, cooling capacity of all car models to date; self-calculating variety; rugged construction thermometer; able to test solutions up to 180° approximate; for all ethylene glycol and methanol types.

Battery Testers—(see Tester, Battery cell—4815)

2205 Imposing Stone Table

General Shop

Graphic Arts: beginning, advanced

General Shop: Top 31" x 39"; with cabinets below for 1 font of reglets, 1 font of furniture; storage unit for 8" x 12" and 10" x 15" chases; storage unit for 8 3/4" x 13" galleys; with drawer.

Graphic Arts: 27" x 39" (beginning); 31" x 39" (advanced); cast iron surface; furniture font; reglet font galleys.

2210 Indicator, Dial test

Auto and Power Mechanics: advanced

Metalworking: advanced

Auto and Power Mechanics: For cylinders; dial mounted on block that moves at right angles to the sled; sled to maintain in alignment with cylinder walls; sled is hardened and ground; adjustable handle; dial with locking mechanism, and non-breakable crystal; adjustable zero location by turning dial face; range 2 1/2" to 6", in graduations of .001"; dial reading 0-100, one revolution .100°.

Metalworking: Ratchet joint contact point; reversible action; range .030, adjustable dial.

Iron, Soldering (see: Soldering copper, Electric #4295-#4325)

2215 Jack Auto bumper (double-saddle type)

Auto and Power Mechanics: beginning, advanced
Hydraulic; 24" travel; built-in lowering speed control valve; open; "V" shaped base; portable unit on wheels; capacity 4000 lbs.; lifting range 5 7/8"-37"; horizontal arm (twin lift) spread 12"-45"; with extensions; universal bumper saddles. (Must conform to ASA standards.)

2220 Jack, Auto, Hydraulic floor type (1 1/2 ton)

Auto and Power Mechanics: beginning, advanced
24" lift; 90° handle stroke; with safety lock, direct-action release control; built-in lowering speed control valve; swivel lifting cap. (Must conform to ASA standards.)

2225 Jack, Auto, Hydraulic (standard type) (1 1/2 ton)

Auto and Power Mechanics: beginning, advanced
Woodworking: advanced
Wide base; self locking extension screw with serrated saddle; built-in lowering speed control valve; lifts 7" to 14 1/4". (Must conform to ASA standards.)

2230 Jack, Auto, Hydraulic (standard type) (2 ton)

Auto and Power Mechanics: advanced
Strong handle socket; guard lugs to protect piston; self locking extension screw with serrated saddle; 23 1/2" handle (two piece); wide base; built-in lowering speed control valve; lifts 8 1/2" to 18". (Must conform to ASA standards.)

2240 Jars, Grinding

Ceramics: beginning, advanced
Of special wear-resistant porcelain containing Byrundum; wide mouth for easy loading; integral lid and lock for fast opening and closing; eight sizes: 1/2 pt. to 6 1/2 gals.

2245 Jig, Doweling

General Shop
Woodworking: beginning, advanced
With guides: 3/16, 1/4, 5/16, 3/8, 7/16, 1/2".

2250 Jigger, Electric (industrial model)

Ceramics: beginning, advanced
Variable speed wheel and jigger; 3/4 HP electric motor; speeds from 0 to 525 RPM; weight 475 lbs.

2255 Jogger, Paper

Graphic Arts: advanced
Vibrating; 14" x 20"; 110V.

2260 Jointer (6")

Elementary
General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

Long bed; floor model with totally enclosed metal stand to include right and left tilting fence, knife safety guards for both front and rear, individual table adjustment for infeed and outfeed tables and rabbeting capacity of $\frac{1}{2}$ ". Motor: $\frac{1}{2}$ HP, 60 cycles, 3-phase, 220V, with magnetic switch and overload protection.

2265 Jointer (8')

Woodworking: advanced

Long bed; floor model with totally enclosed metal stand to include right and left tilting fence, knife safety guards for both front and rear, individual table adjustment for infeed and outfeed tables, and rabbeting capacity of $\frac{1}{2}$ ". Motor: $1\frac{1}{2}$ HP, 60 cycles, 3-phase, 220V, with magnetic switch and overload protection.

2275 Jolt Squeezer, Foundry

Metalworking: advanced

Table size 17" x 20"; diameter 10"; capacity 6,000 lbs.; maximum jolt load 400 lbs.; variable distance from table to squeeze plate from 11" minimum to 17" maximum; to operate on 80 lbs. air line pressure.

2280 Kiln Cut-off, Automatic (heat control device)

Ceramics: beginning, advanced

Automatic shut-off for both gas and electric kilns; for temperatures to 2500°F; able to set meter-relay pointer at a pre-determined temperature; uses pyrometric cones to trigger switch action.

2285 Kiln, Electric

Ceramics: beginning, advanced

Elementary

General Shop

Firing chamber $6\frac{1}{2}$ " x 7" x 4"; 172 cu. in.; temp. 3000°F; firing time to 1500°F in 35 minutes; 110V AC; 14.5 Amp; 2 firing speeds; wt. 50 lbs.

2290 Kiln, Enameling

Ceramics: beginning, advanced

Elementary

General Shop

Designed for enameling. 110V AC; case-welded steel construction; heating elements in sides of kiln; interior 4" x $8\frac{1}{2}$ " x 8"; gravity-type door, self sealing, with peephole; wt. 31 lbs; 10 Amps.

2295 Kiln, Front loading

Ceramics: beginning, advanced

General Shop

For temperatures to 2000°F, 18" x 18" x 19" chamber. 220-230V AC.

- 2300 Kiln, Gas**
 Ceramics: beginning, advanced
 Front loading, forced-draft; for temperature to 2500°F; automatic cut-off controls; 20 cu. ft.; chamber 32" x 24" x 46".
- 2305 Kiln, Starter**
 Ceramics: beginning, advanced
 For starting or stopping kiln automatically at clock-timed intervals.
- 2310 Kiln, Top loading**
 Ceramics: beginning, advanced
 Electric; for temperatures to 2300°F, (cone 8) 17" x 17" x 18" chamber.
 Knife, Bevel point (see: Knife, Skiving #2365)
- 2315 Knife, Carving (set)**
 Drafting: advanced
 Elementary
 To include three blade holders; #1, #2, #6 knives; assorted extra blades; with box fitted for all parts.
- 2320 Knife, Electrician's**
 Electricity-Electronics: beginning, advanced
 With screwdriver blade and insulation scraper.
- 2325 Knife, Fettling**
 Ceramics: beginning, advanced
 For cleaning up greenware and for hand building work; thin and flexible.
- 2330 Knife, Head**
 Elementary
 For leather work; 4½" from point to point; 2⅜" at center.
- 2335 Knife, Ink**
 General Shop
 Graphic Arts: beginning, advanced
 Square end; 8".
- 2340 Knife, Leather**
 General Shop
 Square end.
- 2345 Knife, Make ready and stripping**
 Graphic Arts: beginning, advanced
 #12 "Exacto".
- 2350 Knife, Mold maker's**
 Ceramics: beginning, advanced
 For mold work and general carving; blue finish; round white handle; blade length 4¾"

- 2355 Knife, Padding**
Graphic Arts: beginning, advanced
Round end.
- 2360 Knife, Putty**
Elementary
General Shop
Woodworking: beginning, advanced
Approximately 1"W; flexible tool steel blade.
- 2365 Knife, Skiving**
Elementary
General Shop
Bevel point.
- 2370 Knife, Sloyd**
Elementary
General Shop
Woodworking: beginning, advanced
Blade approximately 2 $\frac{5}{8}$ "L.
- 2375 Knife, Stencil**
General Shop
- 2380 Knife, Swivel cutter**
Elementary
General Shop
Chrome plated; hardened tool steel.
- 2385 Knurling Tool, Lathe (coarse)**
Metalworking: advanced
Self centering; coarse diamond.
- 2390 Knurling Tool, Lathe (fine)**
Metalworking: advanced
Self centering; fine diamond.
- 2395 Knurling Tool, Lathe (medium)**
Metalworking: advanced
Self centering; medium diamond.
- 2400 Ladle, Bottom pour**
General Shop
5" diameter of bowl.
- 2405 Lamps, Drying (set)**
Auto and Power Mechanics: advanced
- 2410 Lathe, Armature**
Auto and Power Mechanics: advanced

2415 Lathe, Metalworking (10")

Auto and Power Mechanics: advanced

General Shop

Metalworking: beginning, advanced

Plastics: advanced

Minimum distance between centers 24"; cabinet model; underneath drive; quick change gear box; 54 thread and spindle changes L.H. or R.H. from 4 to 224; speeds from 50 to 1500 RPM; motor: $\frac{3}{4}$ HP, 208-220V, 3-phase, drum switch and magnetic starter. Equipped with drive plate, spindle adapter, centers for head-stock and tailstock, tool post, ring and rocker, thread chasing dial and tool post wrench, 3-jawed chuck, 4-jawed chuck.

2420 Lathe, Metalworking (14")

Metalworking: advanced

Minimum distance between centers 36"; capacity through spindle 1-1/16"; cam lock spindle nose; center Morse Taper #3; spindle speeds: direct drive 215 to 875 RPM, backgeared 30 to 130 RPM; quick change gear box 4 to 224 threads per inch; tailstock spindle #3 Morse Taper; thread indicator dial; with 3-jawed and 4-jawed chuck; taper attachment, face plate; tool post assembly; centers and spindle sleeve; motor: 2 HP, 220V, 3-phase, pushbutton line starter control-forward, reverse, stop and magnetic reversing linestarter.

2430 Lathe, Spinning (12")

Metalworking: advanced

Plastics: beginning, advanced

Variable speed drive; speeds 650 to 3450 RPM; 1 HP motor; 220V; 3-phase; magnetic starter; metal spinning face plate; spinning tool rest with fulcrum pins; spinning center; spur center and cup center; set of metal spinning tools; set of wood turning chisels.

2435 Lathe, Wood turning

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

12" gap bed floor model with enclosed metal cabinet with 16 1/2" capacity over gap and at least 38" between centers. Motor $\frac{3}{4}$ HP, 60 cycles, 220V, 3-phase with mounted switch and overload protection. To include cup center, spur center, 3 face plates, 1—6" tool rest, 1—12" tool rest, 1 tool support base, 1 knockout bar.

2440 Leads (2 point) (25 lb. pkg.)

General Shop

2445 Leather Modeling Tool (set)

General Shop

2450 Leggings, Molder's (pair)

General Shop

Metalworking: beginning, advanced

2455 Lettering guide line instrument

Drafting: beginning, advanced

Transparent plastic disk in plastic frame; produces uniformly spaced lines; holes in disk produce letters in proportions of $\frac{3}{5}$, $\frac{2}{3}$, or $\frac{1}{1}$; will produce 65° and 75° direction lines; graduated in 32nds of an inch and may also be graduated in millimeters.

2460 Lettering Set

Drafting: advanced

General Shop

Professional quality; 11 templates with standard capital and lower case letters on each; size .080CL, .100CL, .350CL, .425CL, .500CL; in polished mahogany case; 11 pens sizes 000, 00, 0, 1, 2, 3, 4, 5, 6, 7, 8; adjustable scribe; scribe stand; lead clutch; socket holder; and pen holder.

2465 Level

General Shop

Woodworking: beginning, advanced

Two double plumbs, one double level. 24" long.

2470 Lift, Engine safety

Auto and Power Mechanics: advanced

(Engine Lifting Cable) 30"L including hook and adapter; 2 ton capacity; safety saddle permitting tilt adjustment.

2475 Lift, Pallet

Ceramics: beginning, advanced

Hydraulic: hand truck.

2480 Light, Darkroom

Graphic Arts: beginning, advanced

Red; amber, or as appropriate to film.

2485 Light, Flood

Graphic Arts: beginning, advanced
10".

2490 Light, Extension

Electricity-Electronics: advanced

Miniature extension probing light.

2495 Locks, Magnetic galley

Graphic Arts: beginning, advanced

2500 Loom, Table

Elementary

4 harness; 8" weaving space; pressed steel.

2505 Machine, Drafting (18°)

Drafting: advanced

General Shop

18" drafting machine with 15° automatic indexing, full circle base line setting, fully graduated protractor, disc brake, and self-locking scales, of one each 9" and 18".

2510 Machine, Drafting (24")

Drafting: advanced

Track-type; with standard protractor head; automatic 15° indexing; protractor divided to 1 degree with vernier scale for sub-division of degrees; full 360 degree baseline setting; positive braking system; locks for both horizontal and vertical movement or either; may be specified for appropriate board size, usually 29" x 40" or larger; with one 12" and one 18" scale.

2515 Machine, Reproduction (dry type)

Drafting: beginning, advanced

Dry diazo white printer; table model; synchronized printing and moist developing up to 14 foot per minute; minimum lamp rating 35 watts per inch; width capacity 42"; current 115V; 60 cycle AC; a system to exhaust ammonia fumes from the room is desirable with this type of machine.

2520 Machine, Reproduction (moist type)

Drafting: beginning, advanced

General Shop

Moist diazo white printer; table model; synchronized printing and moist developing up to 14 foot per minute; minimum lamp rating 35 watts per inch; width capacity 42"; current 115V; 60 cycle AC.

2525 Magnifiers

Graphic Arts: beginning, advanced

Etcher's type; 10X; for negative examination.

2530 Magnet, Bar

Electricity-Electronics: beginning, advanced

Cobalt steel ALNICO type; minimum size 1/4" x 1/2" x 3".

2535 Mallet, Hardwood

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced

2540 Mallet, Rawhide

Auto and Power Mechanics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

10 oz.

- 2545 Mallet, Rubber**
 Auto and Power Mechanics: beginning, advanced
 Metalworking: beginning, advanced
 Length of head approximately 3½"; rubber face approximately 2"; hickory handle.
- 2550 Mandrel, Expansion (set)**
 Metalworking: advanced
 Range ⅜" to 2½"; includes sizes ¼", 5/16", ⅜", 7/16", ½", ⅝", ¾", ⅞", 1".
- 2555 Mandrel Set**
 Metalworking: advanced
 Includes sizes ¼", 5/16", ⅜", 7/16", ½", ⅝", ¾", ⅞", 1".
- 2560 Marker, Felt-tip, Color (set)**
 Elementary
 Graphic Arts: beginning, advanced
- 2565 Marking Tool, Electric**
 Drafting: beginning, advanced
 Tantalum carbide point.
- 2570 Mason's Tools, Cement (set)**
 Ceramics: beginning, advanced
- 2575 Meter, Ammeter (AC)**
 Electricity: beginning, advanced.
 General Shop
 Range 0-25 amps.
- 2580 Meter, Ammeter (DC)**
 General Shop
 Range 0-10 amps.
- 2585 Meter, Battery tester**
 General Shop
 Electricity-Electronics: beginning, advanced
 Switch positions 1.5, 4.5, 6.0 7.5, 9.0, 22.5, 45, 67.5, 75, 90 volts.
- 2590 Meter, Galvanometer**
 Electricity-Electronics: advanced
 Woodworking: advanced
 500-0-500 micro amperes.
- 2595 Meter, Grip dip**
 Electricity-Electronics: advanced
 400 KC to 250 MC.
- 2600 Meter, Light**
 Graphic Arts: beginning, advanced

For measurement of reflected and/or incident light; for film speeds to 12,000 ASA; case and neck strap included; (if of Cd.S. type, should include mercury battery power supply).

- 2605 Meter, Moisture content (electric)**
Woodworking: advanced
- 2610 Meter, Volt-ohm (multi-range)**
Electricity-Electronics: advanced
General Shop
Woodworking: advanced
Sensitivity @ 20,000 ohms/volts D.C. Minimum voltage ranges: 0-1500V. Resistance ranges covering 0-1000 megohms; overload protected.
- 2615 Meter, VTVM**
Electricity-Electronics: advanced
General Shop
Broad ranges and overload protection.
- 2620 Micrometer, Inside (set)**
Auto and Power Mechanics: beginning, advanced
Metalworking: beginning, advanced
Range 2"-12" graduations in thousandths of an inch; 10 measuring rods and one 1/2" gauge encase solid rods; hardened and ground anvils on rods; adjustable for length; hardened and ground screw.
- 2625 Micrometer, Outside (1")**
Auto and Power Mechanics: beginning, advanced
Drafting: advanced
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Graduated in .001"; hardened and ground threads; with spindle lock and ratchet adjustment.
- 2630 Micrometer, Outside (2")**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Graduated in .001"; hardened and ground threads; with spindle lock and ratchet adjustment.
- 2635 Micrometer, Outside (3")**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Graduated in .001"; hardened and ground threads; with spindle lock and ratchet adjustment.

2640 Micrometer, Outside (4")

Auto and Power Mechanics: advanced

Graduated in .001"; hardened and ground threads; satin chrome finish; with spindle lock and ratchet adjustment.

2645 Micrometer, Outside (5")

Auto and Power Mechanics: advanced

Graduated in .001"; hardened and ground threads; satin chrome finish.

2650 Micrometer, Outside (screw thread)

Metalworking: advanced

Pitch diameters 0 to 1" graduated in .001"; 8 to 13 threads per inch.

2655 Micrometer, Outside (screw thread)

Metalworking: advanced

Pitch diameters 0 to 1" graduated in .001"; 14 to 30 threads per inch.

2660 Microscope

Plastics: advanced

Woodworking: beginning, advanced

10x Hygienian eyepiece with pointer, triple revolving nosepieces; 3 standard objectives: 4x, 10x, 43x; plain stage with side clips; fixed in stage condenser; iris diaphragm; in base illuminator.

2665 Milliammeter, Volt-ohm

Auto and Power Mechanics: advanced

Factory-wired and calibrated; fuse-protected ohms-divider network; easy-to-read scales; polarity reversal switch; full-wave bridge rectifier; standard ohm ranges; with probe and cable.

2670 Milling Machine, Horizontal

Metalworking: advanced

No. 2 Knee and Column, plain style. Specifications may vary according to need—these features, however, should be considered: fast, easy feed selection, directional feed controls, power rapid traverse, built-in backlash eliminator, spindle speeds selections, convenient electrical controls, ruggedness of construction, trip dogs and positive safety stops, easy chip removal and sump cleaning, anti-friction bearings, positive lubrication, safety features and simplicity of maintenance; includes Morse taper adaptor.

2675 Milling Machine, Universal

Metalworking: advanced

Spindle C/L to table top with cutterhead horizontal 0 to 23", spindle nose to table top with cutterhead vertical 0 to 17" with adjustable cutterhead that can be positioned through a full 90° for vertical, angular, or horizontal milling. Other features to be considered: gib design, spindle drive motor, feed motor, coolant system, table work-

ing surface, saddle, ram, overarm, feed ranges, spindle speeds, controls, and lubrication.

2680 Milling Machine, Vertical

General Shop

Metalworking: advanced

Approximate range 9" x 40" table working surface, longitudinal table travel 26", cross travel 10", vertical travel of knee 18", vertical travel of spindle 5", turret to rotate 360° on column, head to rotate 360° on ram. Other features to be considered: gibs, accuracy and movement of all bearing surfaces, spindle bearings, spindle tapers, spindle speeds, 4-way head, balanced pulleys, power feed table, motors and electrical controls.

2685 Mitering Machine

Graphic Arts: beginning, advanced

Miters to 45°; square ends of rules; gauge sets to 63 Picas by Picas and nonpareils.

2690 Mitre Box

Elementary

General Shop

Woodworking: beginning, advanced

26° x 4" back saw; 8¼" right angle capacity.

2695 Mixer, Slow speed (portable)

Ceramics: beginning, advanced.

Motor or air driven. ¼ HP, dip proof, ball bearing motor attached to gear box. Stainless steel shaft is adjustable. To 8" diameter stainless propellers are furnished. 400 RPM.

2700 Mixing Bowls (set)

Plastics: beginning, advanced

Set of 3 sizes; stainless steel kitchen type.

2705 Modeling Tool (set)

Ceramics: beginning, advanced

Elementary

General Shop

Boxwood; fine wire pillard; kit of 10 modeling tools in plastic box.

2710 Mold, Ingot

General Shop

Metalworking: beginning, advanced

2715 Molder, Blow

Plastics: advanced

6" x 12" platen; cylinder approximately 2½" bore, 2" stroke; pneumatic operation; electronic cycling mechanism; provisions for connection to power and air.

2720 Molder, Rotational

Plastics: advanced

Variable speed drive 2 to 15 RPM, 1/4 HP, 110V motor with reversing switch; mold area approximately 15" diameter; oven 220V, 3-phase, temperature controlled 150°-600°F with circulating fan.

2725 Molding Press, Compression (large)

Plastics: beginning, advanced

Capacity 75 ton or more; two or more 220V, 3-phase electrically heated platens controlled from 200°-600°F; manual or motor operated hydraulic; platen size minimum 18" x 18"; piston stroke 5" minimum daylight opening; at least 8" with 4" removable adaptor.

2730 Molding Press, Compression (medium)

Plastics: beginning, advanced

Capacity 50 tons two 220V, 3-phase electrically heated platens controlled from 200°-600°F; manually operated two-stage hydraulic; platen size 12" x 12" minimum; piston stroke 5" minimum daylight opening—at least 6" with 4" removable adaptor.

2735 Molding Press, Compression (small)

Plastics: beginning

Capacity 20-25 tons; two 220V, 3-phase electrically heated platens controlled from 200°-600°F; manually operated hydraulic; platen size 6" x 6" minimum; piston stroke 4" minimum daylight opening—at least 6" with 3" removable adaptor.

2740 Molding Press, Injection (large)

Plastics: advanced

Capacity 3 oz. of styrene with appropriately rated mold size and clamping pressure; heaters 220V, 3-phase; motor operated hydraulic system; automatic and semi-automatic cycling.

2745 Molding Press, Injection (medium)

Plastics: beginning, advanced

Capacity 1 1/2 to 2 oz. of styrene with appropriately rated mold size and clamping pressure; heaters 220V, 3-phase; motor operated pneumatic or hydraulic systems; automatic or semi-automatic cycling.

2750 Molding Press, Injection (small)

General Shop

Plastics: beginning

Capacity 1/4 to 3/4 oz. of styrene with appropriately rated mold size and clamping pressure; heaters 110V, single-phase; hand operated mechanical or pneumatic.

2755 Molding Press, Transfer (large)

Plastics: advanced

Capacity 75 tons or more on clamp; two electrically heated 220V, 3-phase heated platens; motor operated hydraulic; platen size 18" x 18" minimum; piston stroke approximately 5"; transfer force approximately 20 tons minimum; transfer stroke approximately 3" minimum.

2760 Molding Press, Transfer (medium)

Plastics: advanced

Capacity approximately 50 tons on clamp; two electrically heated 220V, 3-phase platens; hand or motor operated hydraulic; platen size 12" x 12" minimum; piston stroke approximately 5"; transfer force approximately 15 tons; transfer stroke approximately 3".

2765 Molds, Ceramics (assorted)

Ceramics: beginning, advanced

General Shop

For slip casting.

2770 Mortar and Pestle

Ceramics: beginning, advanced

Acid resistant, thick chemical porcelain; possesses a surface texture which facilitates grinding.

2775 Mortar Box

Ceramics: beginning, advanced

2780 Mortiser, Hollow chisel

Woodworking: advanced

Floor model with 1/2" mortise capacity and to handle stock up to 20"L. Complete with compound table and lateral adjustments, hold down attachment and foot lever control. Machine to include one each of the following drills and hollow chisel bits: 1/4", 5/16", 3/8", 7/16", and 1/2" and 1/4" and 5/16" bit bushings. Motor: 1 HP, 60 cycles, 220V, 3-phase with mounted switch and overload protection.

2785 Motor Stand, Universal

Auto and Power Mechanics: advanced

2000 lb. capacity; 360° rotation; stop in any position.

2790 Muller-Mixer

Ceramics: beginning, advanced

Blends dry ceramic bodies quickly, uniformly, and completely, ready for preparation for throwing, dry pressing. Cast aluminum drum—diameter 13 1/4", depth 6 3/4"; hinge door at bottom. Two cast aluminum muller wheels 6 1/4" diameter x 1 1/2". Chromium plated scraper blades. 1/3 HP, 115V AC-DC. 3-wire cord and plug.

2795 Multiscope

Auto and Power Mechanics: advanced

2800 Nail Set (1/16" tip)

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

Square head.

- 2805 Nail Set (3/32" tip)**
Elementary
Woodworking: beginning, advanced
Square head.
- 2810 Needle, Binding**
Graphic Arts: beginning, advanced
- 2815 Needle, Knitting (pair)**
Elementary
10" standard length.
- 2820 Needle, Lacing**
General Shop
- 2825 Needle, Raffia (card)**
Elementary
Card of 2 needles: 1 straight, 1 curved.
- 2830 Nibbler, Hand operated**
Electricity-Electronics: beginning, advanced
Capacity: 18 ga. steel.
- 2835 Nipper, End-cutting**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Woodworking: beginning, advanced
6"; compound lever action.
- 2840 Nipper, Tile**
General Shop
Carbide cutting edges.
- 2845 Nozzle, Blow gun (air line)**
Auto and Power Mechanics: beginning, advanced
Woodworking: beginning, advanced
Forged brass body; air blast controlled by pressure button.
- 2850 Numbering Machine, Cleaner box**
Graphic Arts: beginning, advanced
Removable cleaning section.
- 2855 Numbering Machine, Hand**
Graphic Arts: beginning, advanced
6 wheel machine; five movements: duplicate, triplicate, quadruplicate, consecutive, repeat; drop cipher.
- 2860 Numbering Machine, Press**
Graphic Arts: beginning, advanced
General Shop
6 wheel; forward and backward movement; lowplunger.

Nutdriver (see: Wrench, Nutdriver #5330).

2865 Oiler, Bench

Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
1/3 pint or 1/2 pint size; 5" straight spout.

2870 Oiler, Pump

Auto and Power Mechanics: beginning, advanced
Graphic Arts: beginning, advanced
Woodworking: beginning, advanced
5 oz. capacity; trigger operated spout approximately 5"L; seamless construction.

2875 Oiler, Straight

Auto and Power Mechanics: beginning, advanced
1/2 pint.

2880 Oilstone, Arkansas

Drafting: beginning, advanced
Wedge-shaped; tapering from 1/4" to very thin edge; fine grain for sharpening ruling pen nibs.

2885 Oilstone, Carving tool slips (set)

General Shop
Woodworking: beginning, advanced
India stones.

2890 Oilstone, Combination, India

Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Coarse and fine grits; 8" x 1" x 2".

2895 Oilstone, Combination, Silicon carbide

Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced

- General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Coarse, fine; 8" x 1" x 2".
- 2900 Oilstone, Gouge slip**
General Shop
Woodworking: beginning, advanced
India stone.
- 2905 Oilstone, Slip**
General Shop
Woodworking: beginning, advanced
India stone.
- 2910 Oscilloscope**
Electricity-Electronics: beginning, advanced
General Shop
Z axis input; positive lock internal synchronization; DC or MC wide band scope with 5" screen.
- 2915 Oven**
Elementary
General Shop
Plastics: beginning, advanced
Woodworking: advanced
Laboratory type for heating plastics; 0-550°; inside dimensions approximately 12"W x 10"H x 10"D; with adjustable shelf; complete with switch and automatic thermo control. 220V, 3-phase, or 110V, single-phase; safety vented.
- 2920 Oven, Core**
Metalworking: advanced
Laboratory type for heating plastics; 0-550°; inside dimensions approximately 12"W x 10"H x 10"D; with adjustable shelf; complete with switch and automatic thermo control. 220V, 3-phase; or 110V, single-phase.
- 2925 Packer, Wheel bearing**
Auto and Power Mechanics: beginning, advanced
- 2930 Pad Counter**
Graphic Arts: beginning, advanced
Stabbing type; 3" adjustable for measuring equal size pads.
- 2932 Pan, Dust**
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced

Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
12" steel.

2935 Pantograph, Drafting

Drafting: advanced
21" hardwood bars scaled for reducing or enlarging subjects up to 25 ratios. Metal tracer and lead holder point.

2940 Pantograph, Metalworking

Plastics: advanced
2 or 3 dimensional; enlargement up to 1:16. 220V, single-phase, appropriate cutters.

2945 Parallels, Adjustable (set)

Metalworking: advanced
Set of 6 with capacity range $\frac{3}{8}$ " to $2\frac{1}{4}$ ".

2950 Pen Holder

Drafting: advanced
Wood or metal with cork or rubber grip; protruding metal nib; 6" to 7" in length.

2955 Pen Set

Drafting: advanced
General Shop
One each: Crow quill pen, flexible quill pen, hawk quill pen, mapping pen, imperial or medium pen, drawing pen (round pointed), artist pen (medium size), Crow quill pen holder, regular pen holder.

2960 Pen, Speedball (set)

Drafting: advanced
General Shop
Includes style A, sizes A-0 to A-5; style B, sizes B-0 to B-6; style C, sizes C-0 to C-6; style D, sizes D-00 to D-5.

2965 Pencil Pointer, Lead pencil

Drafting: beginning, advanced
General Shop
Pencil file; hardened tool steel with wood handle; 6"L.

2970 Pencil Pointer, Mechanical

Drafting: beginning, advanced
With abrasive cup; all metal unit; non-skid base.

- 2975 Pencil Sharpener, Draftsman's**
 Drafting: beginning, advanced
 With removal cutters; adjustable setting head; self-feeding.
- 2980 Pencil Sharpener, Standard**
 Auto and Power Mechanics: beginning, advanced
 Ceramics: beginning, advanced
 Drafting: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Graphic Arts: beginning, advanced
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Adjustable setting head; self-feeding.
- 2985 Pencil, Woodburning**
 Elementary
 General Shop
 Replaceable element; interchangeable tips.
- 2990 Perforator**
 Graphic Arts: advanced
 Bench model; 19" capacity; with interchangeable heads.
- 2995 Pipet Control, Microsyrnge**
 Plastics: advanced
- 3000 Plane, Block**
 Elementary
 General Shop
 Woodworking: beginning, advanced
 1 5/8" cutter.
- 3005 Plane Iron, Double**
 Woodworking: beginning, advanced
- 3010 Plane, Jack**
 General Shop
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 14"L; cutter 2" wide.
- 3015 Plane, Jointer**
 General Shop
 Woodworking: beginning, advanced
 22"L; cutter 2 3/8" wide.

- 3020 Plane, Junior jack**
General Shop
- 3025 Plane, Portable, Electric**
Woodworking: advanced
16" complete with spiral cutter, cutter sharpener, grinding wheel spacers, electric cord with 3-prong electric plug, and metal carrying case. (Note: Plane attachment can be purchased for use with portable electric router shaper).
- 3030 Plane, Rabbet**
Woodworking: beginning, advanced
4"L; 1" cutter.
- 3035 Plane, Router**
Woodworking: beginning, advanced
With 3 cutters ($\frac{1}{4}$ ", $\frac{1}{2}$ ", and V).
- 3040 Plane, Smoothing**
Elementary
General Shop
Woodworking: beginning, advanced
Length: 9"; blade width: $1\frac{3}{4}$ ".
- 3045 Planer, Type**
General Shop
Graphic Arts: beginning, advanced
 $1\frac{3}{4}$ " x 3" x $11\frac{1}{2}$ " and $3\frac{1}{4}$ " x 3" x $21\frac{1}{2}$ " (suggest two sizes needed); maple wood; varnished; leather top; shaped for ease in handling.
- 3050 Plaster Working Tool**
Ceramics: beginning, advanced
Made of hand forged, hand ground, highly tempered tool steel. Average length 7". Six tools available in plain, chisel, and toothed edges.
- 3055 Plate, Angle**
Metalworking: advanced
4" x 5" x 6".
- 3060 Plate, Surface**
Metalworking: advanced
10" x 15"; hand scraped.
- 3062 Plate-maker**
Graphic Arts: beginning, advanced
Approximately 24" capacity with "flip-top"; vacuum contact plate; xenon light; 110/220 with ground wire.
- 3065 Pliers, Battery**
Auto and Power Mechanics: beginning, advanced

Heavy duty gripping; 6-7/16"L; 2 position slip-joint; nickel chrome plated; wire cutter; serrated throat.

3070 Pliers, Bent nose
General Shop
6".

3075 Pliers, Brake
Auto and Power Mechanics: beginning, advanced
All purpose; Bendix socket on handle.

3080 Pliers, Chain
Auto and Power Mechanics: beginning, advanced

3085 Pliers, Combination (6")
Auto and Power Mechanics: beginning, advanced
Ceramics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Forged steel, machined, hardened, and oil tempered.

3090 Pliers, Combination (8")
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Forged steel, machined, hardened, and oil tempered.

3095 Pliers, Duckbill
Electricity-Electronics: beginning, advanced
8".

3100 Pliers, Diagonal-cutting
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
6"; drop forged.

3105 Pliers, Electrician's
Elementary
General Shop
8"; side-cutting; forged steel, with plastic insulated handles.

- 3110 Pliers, End-cutting**
 General Shop
 Plastics: beginning, advanced
 Forged steel, hardened, oil tempered.
- 3115 Pliers, Hose clamp, Radiator and gas line**
 Auto and Power Mechanics: advanced
 General Shop
 2 position slip joint; for $\frac{3}{4}$ " to 2" diameter; milled (fluted) jaws to hold clamp at right angles to handles; 8"L handles; plastic handles.
- 3120 Pliers, Ignition**
 Auto and Power Mechanics: beginning, advanced
 Narrow jaws; 3 position slip joint.
 Pliers, Lever, Wrench (see: Pliers, Vise-grip wrench #3170).
- 3125 Pliers, Lineman's**
 General Shop
 6"; side-cutting; forged steel, machined, hardened, and oil tempered; with plastic insulated handles.
- 3130 Pliers, Long nose**
 General Shop
 6"; side-cutter.
- 3135 Pliers, Needle nose**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Metalworking: beginning, advanced
 6".
- 3140 Pliers, Retaining ring**
 Auto and Power Mechanics: beginning, advanced
 8" or 5"; designed to grasp retaining springs by their lugs; black lacquer finish.
- 3145 Pliers, Round nose**
 General Shop
 6"; forged steel.
- 3150 Pliers, Side-cutting (6")**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Forged steel, machined, hardened, spring tempered handles.
- 3155 Pliers, Straight nose**
 Drafting: beginning, advanced
 Plastics: beginning, advanced

- Metalworking: beginning, advanced.
8"; combination; forced steel.
- 3160 Pliers, Tongue and groove**
Plastics: beginning, advanced
("Channel-lock"). Length: 10"; capacity: 1½".
- 3165 Pliers, Tru-arc (#2)**
General Shop
For replacing "tru-arc" rings on axles or shafts; for small engine work.
- 3170 Pliers, Vise-grip wrench**
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
7"; easy release.
- 3175 Pliers, Waterpump**
Auto and Power Mechanics: beginning, advanced
5 adjustments ("channel-lock"). 5 position slip joint; jaws parallel opening to 2"; 45° angle jaws; 21/64" T.
- Plug Cutter (see: Bit, Plug cutter (set) #0330).**
- 3190 Pneumatic Instruction Center (pneumatic power unit)**
Auto and Power Mechanics: advanced
Universal mounting system; components suitable for teaching-learning; bench heavy steel top and frame, interior fitted for storage of components, master-keyed doors; instrument panel contains water manometer, mercury manometer, 160 lb. pressure gauge, rotameter, type flowmeter, air compressor controls including switch, fuse, pilot light and convenience outlet; ½ HP oilless compressor with 10 gal. ASME pressure tank, pressure switch and relief valve; circuitry of ⅜" plastic tubing, flexible, with hand-tite fittings; power requirement of 120V 5A, with 3-wire cord and grounded plug.
- 3195 Polisher, Body**
Auto and Power Mechanics: beginning, advanced
Portable air polisher; RPM-4500.
- 3200 Potter's Wheel, Electric**
Ceramics: beginning, advanced
General Shop
½ HP, 110/220V AC-DC motor; variable speeds 0 to 120 RPM; for-

ward or reverse; 14" cast aluminum alloy throwing head; table 24" x 30". Water and shock-proof switch. 3-wire conductor with ground.

3205 Potter's Wheel, Kick

Ceramics: beginning, advanced

Seated type; welded tubular steel, kick wheel-iron casting machined to true balance 28"D weighs 115 lbs. A 1½ true-level track machined on rim for power attachment.

3210. Potter's Wheel, Side-kick

Ceramics: beginning, advanced

Standing type; welded construction; 14" aluminum wheel head; removable; fiberglass pan; 75 lb. flywheel.

3215 Power Supply, Low voltage

General Shop

AC and DC; 0-15V; maximum 5 amperes.

3220 Power Supply, Variable output

Electricity-Electronics: beginning

General Shop

0-20V AC and DC at 10 amperes; fused or diode protected.

3225 Power Supply, Variable output, Filtered

Electricity-Electronics: advanced

General Shop

0-300V DC at 100 ma; with filament voltages.

3230 Pre-expander, Polystyrene

Plastics: advanced

Steam or electrical 220V, 3-phase; controlled densities from 1 lb. per cubic foot.

3235 Press, Arbor

Auto and Power Mechanics: beginning, advanced

General Shop

Metalworking: advanced

Auto and Power Mechanics: Hydraulic; 25 ton capacity; pressure gauge; 6" ram travel; hand operated pump; 2 speed.

General Shop and Metalworking: 3 ton capacity gear driven.

3240 Press, Block printing

Elementary

Lever type; prints up to 8" width paper.

3245 Press, Copying

Graphic Arts: beginning, advanced

11" x 16" capacity; ball and socket joint to connect main screw with plate.

3250 Press, Drill (15")

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

15" capacity; variable speed; #2 Morse taper in spindle; floor model; 1/2" key chuck; tilting standard table; with 1/2 HP, 220V, 3-phase motor, and magnetic switch and starter.

3255 Press, Drill (17")

Auto and Power Mechanics: beginning, advanced

Metalworking: advanced

Floor model; variable speed 300 to 3100 RPM; production table with raising and lowering mechanism; #3 Morse taper spindle; key chuck, 1/2" capacity; belt and pulleys completely guarded; 3/4 HP motor (minimum); 220V; 3-phase; push button magnetic control and starter.

3260 Press, Hot stamping

Graphic Arts: beginning, advanced

1" type holder.

3265 Press, Hydraulic, Heated platen

Woodworking: advanced

Minimum capacity of 12 tons with 12" x 12" platen platen temperatures to be individually controlled and metered; daylight opening to be a minimum of 5".

3270 Press, Offset

Graphic Arts: beginning, advanced

11" x 15"; 3 cylinder; chain pile; delivery; tumbler grippers, two 1/3 HP, 110V, 60-cycle motors; including all standard equipment and safety guards.

3275 Press, Padding

General Shop

Graphic Arts: beginning, advanced

Bench model; quick adjusting to various size sheets and stock pile height; 12" x 18".

3280 Press, Platen

General Shop

Graphic Arts: beginning, advanced

12" x 18"; handfed; power operated; guards; counter; fountain; variable speed; 1/2 HP, 220V, 3-phase, 60-cycle motor; with flywheel, pulley, and impression safety guards.

- 3285 Press, Platen, Automatic feed**
Graphic Arts: advanced
10" x 15"; with automatic wash-up; central lubrication system; two-up attachment; 220V, 3-phase, 60-cycle.
- 3290 Press, Platen, Hand lever**
General Shop
Graphic Arts: beginning, advanced
6" x 10"; with ink disc, depressable grippers, trucks tools and 3 chases. Stirrup handle, 2 rollers; with cabinet.
- 3295 Press, Proof**
General Shop
Graphic Arts: beginning, advanced
Flat bed; impression cylinder; without grippers; base.
- 3300 Press, Proof, Reproduction**
Graphic Arts: advanced
Hand operated; impression cylinder; gripper bar; base.
- 3305 Press, Rubber stamp**
General Shop
Graphic Arts: beginning, advanced
Complete with thermostat, timer, bell, pilot light, temperature gauge, cord and switch; 1110 V.
- 3310 Printer, Contact**
Graphic Arts: beginning, advanced
Beginning: 35 MM through 5/7; positive paper stops; stainless steel masks; automatic exposure switch; steel housing; 100V AC.
Advanced: Adjustable margins to 8" x 10"; automatic time control; built-in safe light; built-in-paper and negative holder; 100V AC.
- 3320 Printmaker, Graphic arts**
General Shop
Graphic Arts: beginning, advanced
12" x 12" steel bed; 10 x 14 Chase.
- 3325 Projection Box, Plastic**
Drafting: beginning
3 plastic hinged planes about 12" x 12" per plane and base.
- 3330 Projection Box, Plastic, Instructor's**
Drafting: advanced
Includes hinged plastic planes and base, suspension holes, devices to illustrate points, lines, and planes.
- 3335 Projection Box, Plastic, Student's**
Drafting: advanced
Three 4" x 4" plastic planes hinged with cloth tape.
Projection Screen (see: Screen, Projection #3990).

3340 Projector, Filmstrip (35mm) and slide (2" x 2")

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Self-contained in case with lens cover; threading push-in or automatic; slide carrier: 2" x 2" manual lateral construction; glass pressure plates: all glass pressure plates when used to be securely fastened with metal and no adhesive used; 115V AC; 60 cycles; blower cooled; minimum of 500W lamp. Slide feed: manual local, remote or automatic timed interval.

3345 Projector, Motion picture, Sound

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

16mm; 750-1000W, AC lamp; 6" speaker; 12W amplifier; sound and silent speeds; reverse; still picture device. Separate tone and volume controls; 2-inch f/1.6 lens. 115V-120V AC, 750W lamp—with speaker in separate housing. With 400', 800', 1200', 1600' take-up reels; ASA approved.

3350 Projector, Overhead

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Image stage 10" x 10"; 110-120V; 60-cycle electrical system; minimum length 14' of #16—3-wire cord; minimum 100 hourlamp capable of putting 1700 luimens on the screen; single off-on switch for both lamp and for motor; automatic thermal switch for running fan from 3 to 5 minutes after lamp is turned off; head with tilt mechanism up to 30°; focusing mechanism rack and pinion with knob for controls; heavy duty vinyl dust cover; size approximately 18" x 13" x 10½".

3355 Protractor, Chalkboard

Drafting: beginning, advanced
15" hardwood; with magnets, holding knob, hanger holes.

3360 Protractor, Machinist's bevel

Woodworking: beginning, advanced
12" blade; with level in cast iron head.

3365 Protractor, Semi-circular

Drafting: beginning, advanced
Elementary
General Shop
6" molded plastic, beveled edge; graduated in ½ degree increments from 0°-180°.

3370 Pug Mill, Laboratory model

Ceramics: advanced
Extrusion auger machine, de-airing type; tub size 9" x 4'; capacity in 8 hours 1500-2000 lbs.; weight 300 lbs.

3375 Pug Mill, Studio model

Ceramics: advanced
Mixes clay to throwing or modeling consistency; 1½ HP, single-phase motor; 58" x 30" x 2"; capacity 200-300 lbs./hr.

3380 Pug Mill, Vertical

Ceramics: beginning, advanced
12" vertical; weight 780 lbs.; 3 HP motor required; delivers pugged clay at rate of 18" per minute; 3" diameter.

3385 Pug Mill, Extrusion

Ceramics: beginning
Table model; with extrusion dies; 40"L x 8⅞"W x 9½"H; chromium plated to prevent corrosion and wear; 1/3 HP, 115V AC/DC motor; 90 lbs. unit weight; 100 lbs. of clay can be extruded per hour.

3390 Puller Assembly

Auto and Power Mechanics: beginning, advanced
(Harmonic Balancer Puller) designed for jobs with tapped holes, containing 4 slatted yoke to allow use of the tool in 2, 3 hole applications—center screw, swivel and spring, side screws 3 @ 5/16-18 x 2", 3 @ ⅜-24 x 2", 2 @ ⅜-16 x 4".

- 3395 Puller Assembly (large)**
Auto and Power Mechanics: advanced
(2-way Puller Kit) inside and outside jaws heavy duty thread; steel yoke and adjusting nut; with accessories.
- 3400 Puller, Auto body metal (set)**
Auto and Power Mechanics: advanced
Including 10 ton hydraulic unit; extension tubes; adjustable spoon blades.
- 3405 Puller, Axle**
Auto and Power Mechanics: advanced
Universal puller.
- 3410 Puller, Freeze plug**
Auto and Power Mechanics: advanced
- 3415 Puller, Gear (set)**
Auto and Power Mechanics: advanced
(3 jaw reverse gear puller) reversible 3 jaws having a wide face on one end and narrow face on the other; sturdy center screw.
- 3420 Puller, Seal (set)**
Auto and Power Mechanics: advanced
With adapters ranging from 1 3/8-2-7/16.
- 3425 Puller, Steering wheel**
Auto and Power Mechanics: advanced
Capable of removing all makes of steering wheels on cars and trucks; completely universal.
- 3430 Puller, Valve guide and valve**
Auto and Power Mechanics: advanced
(Valve Puller) pulls valves on all makes of cars up to 1 3/4" head diameter; direct pulling action; tapered pulling head to cradle valve; steel yoke.
(Valve Guide Puller) accessory to above; to remove valve guides 5/16" diameter; shank knurled; nuts to be supplied to cover guide sizes 5/16", 11/32", 3/8", 7/16", 1/2" guides.
- 3435 Puller, Wheel (set)**
Auto and Power Mechanics: advanced
Combination slide, hammer and screw type puller containing 2/3 way yoke; 3 medium outside jaws, 2 small inside jaws; 3 large outside jaws; 13" pressure screw; slide hammer shaft; booster hammer; combination yoke; locking collar; locking collar nut; disc spreader; set screw; yoke pin; centering adapter; spring retainer; bar handle; metal storage case.
- 3440 Pulverizer, Laboratory model**
Ceramics: beginning
Casing accurately machined inside; fitted with removable head; grind-

ing spider made of one piece cast steel and machined; replaces mortar and pestle method of grinding clay samples.

3445 Pump, Oil drum

Auto and Power Mechanics: beginning, advanced
For 55 gal. drums.

3450 Pump, Slip, Duplex

Ceramics: advanced
For filter press assembly; laboratory type.

3455 Punch, Center (set)

Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Set of 5; 1/16" to 1/4" diameter at tapered point; knurled grip; hardened at both ends.

3460 Punch, Chassis (round set)

Electricity-Electronics: beginning, advanced
General Shop
Two piece dies; 7/8", 3/4", 1", 1 1/8".

3465 Punch, Chassis (square set)

Electricity-Electronics: beginning, advanced
General Shop
Two piece dies; 1/2", 3/4", 1".

3470 Punch, Drift (set)

Auto and Power Mechanics: beginning, advanced
3/32" to 1/2" by 32nds.

3475 Punch, Drive (set)

Metalworking: beginning, advanced
Set of five; punch diameter 1/8" to 3/8"; 8"L; round shank; knurled grip.

3480 Punch, Hand (set)

Elementary
Plastics: beginning, advanced
For light sheet metal; set of 7 punches and dies; 3/32" to 9/32"; complete with metal box.

3485 Punch, Hollow (set)

Metalworking: beginning, advanced
3/8", 1/2", 5/8", 3/4", 1", 1 1/2", 2".

3490 Punch, Leather, Revolving

Elementary

General Shop

6 tubes sizes; 8"L.

3495 Punch, Paper

Drafting: beginning, advanced

General Shop

Graphic Arts: beginning, advanced

Drafting: Multiple type; punches 1 to 4 holes simultaneously; with adjustable paper guide and punch depressors.

Graphic Arts: Table size, 12" x 18"; drill diameters, $\frac{1}{8}$ " to $\frac{3}{8}$ "; maximum capacity, $1\frac{1}{2}$ "; side and back margin guide; $\frac{1}{4}$ HP, 110V, 60-cycle, single-phase, AC motor.

3500 Punch, Pin (set)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

General Shop

Plastics: beginning, advanced

4"L; set includes diameters from $\frac{1}{16}$ " to $\frac{1}{2}$ " by 32nds.

3505 Punch, Tinner's (set)

General Shop

3510 Pyrometer, Optical

Ceramics: beginning, advanced

Shelf-contained; direct reading; light weight ($3\frac{1}{2}$ " lbs.). Actual matching of brightness is achieved by making the apparent brightness of the glowing body equal to that of the standard light of constant intensity.

3515 Pyrometer, Portable

Ceramics: beginning, advanced

Elementary

Built into a metal case and comes with 30" thermocouple; range to 2500°F.

3520 Pyrometer, Radiation

Ceramics: beginning, advanced

For quick and accurate method of determining temperatures above 1000°F by thermo-electric principles.

3525 Quoin, Hi-speed

General Shop

Graphic Arts: beginning, advanced

3" and 9".

3530 Quoin Key, Hi-speed

General Shop

Graphic Arts: beginning, advanced

- 3535 Rack, Enameling**
General Shop
4" x 3"; mesh.
- 3540 Rack, Glue clamp**
Woodworking: beginning, advanced
72" x 36" x 32"H; open top with sets of grooves to accept bar clamps three feet and over; lower center rail suitable for storing hand screws and C-clamps.
- 3545 Rack, Lumber**
Plastics: beginning, advanced
Horizontal or vertical with storage for approximately 250 board feet of lumber; plywood and hard board storage provided for approximately 36 pieces 48" x 96".
- 3550 Rack, Magazine**
Drafting: advanced
Magazine shelving, 60"H, 12"D, and 36"L; with shelves adjustable every inch; magazine shelves providing a convenient slope for display of current periodicals; storage behind.
- 3555 Rack, Metal storage**
Metalworking: beginning, advanced
Plastics: beginning, advanced
All steel; vertical; approximately 4'W x 9'H; sloping front section with adjustable troughs for bar, rod, angle, etc.; back section open at both ends to accommodate 4' x 8' sheet stock.
- 3560 Rack, Roll, Tympan**
Graphic Arts: beginning, advanced
18"; tension bar with brackets.
- 3565 Rack, Roll, Wrapping paper**
Graphic Arts: beginning, advanced
24"; tension bar with brackets.
- 3568 Rack, Roll, Wrapping paper**
Woodworking: advanced
36"; tension bar with brackets.
- 3570 Radiator Test Plugs (set)**
Auto and Power Mechanics: advanced
- 3575 Rammer, Hardwood**
General Shop
Metalworking: beginning, advanced
Rasp, Wood (see: Files # 1540)
- 3580 Ream, Center (set)**
Metalworking: beginning, advanced
60° included angle; high speed; sizes 1/4", 3/8", 1/2", 5/8", 3/4".

- 3585 Reamer, Cylinder ridge**
Auto and Power Mechanics: advanced
Range 2-11/16" to 5-5/16"; full swivel yoke; will ream modern slant block engines as well as standard cylinders; tungsten carbide cutters.
- 3590 Reamer, Electrician's hand**
Electricity-Electronics: beginning, advanced
1/8" tip; tapered; 5"L.
- 3595 Reamer, Expansion (set)**
Auto and Power Mechanics: advanced
Metalworking: advanced
Set of 8; A to H; semi-high speed steel blades.
- 3600 Reamer, Pipe**
Metalworking: beginning, advanced
1/8" to 1"; round shank.
- 3605 Reamer, Valve seat (set)**
Auto and Power Mechanics: advanced
9/32", 5/16", 11/32" expanding pilots; reamer arbor; 45° finishing reamers (1 1/4", 1-5/16", 1 3/8", 1 1/2", 1 5/8", 1 3/4"); 30° finishing reamers (1 1/2", 1 5/8", 1 3/4"); 20° narrowing reamers (1 1/2", 1 7/8"); 70° narrowing reamers (1-7/16", 1-11/16").
- 3610 Reels, Drop cord**
Auto and Power Mechanics: beginning, advanced
3 wire; 50'; heavy duty; U ground.
- 3615 Refacer, Valve (set)**
Auto and Power Mechanics: advanced
General Shop
0-90 with positive stops at 14, 15, 19, 20, 29, 30, 44, 45, 90; flexible drive shaft; coolant tank; quick set valve stop; collets 9/32" to 9/16"; diamond dresser; tappet holder.
- 3620 Reglets, Wood**
General Shop
Assorted sizes in fronts.
- 3625 Remover, Stud (set)**
Auto and Power Mechanics: advanced
Wedge type action; 1/2" square drive; spring tension pin to hold wedges in place; 2 different sized wedges to increase usable range.
- 3630 Repair Kit, Drafting instrument**
Drafting: advanced
Includes bearings, T-bolts and nuts, needle points to fit instruments in #2190 or #0925.
- 3645 Rethreader, Axle**
Auto and Power Mechanics: advanced

For restoring damaged axle threads; clamp action; sizes $\frac{5}{8}$ "-18,
 $\frac{3}{4}$ "-16, $\frac{7}{8}$ "-14, 1"-14, $1\frac{1}{8}$ "-12, $1\frac{1}{4}$ "-12.

- 3650 Rethreader, Spark plug hole**
Auto and Power Mechanics: advanced
Spark plug tap.
- 3655 Rheostat, 10 ohm**
Auto and Power Mechanics: advanced
- 3660 Riddle, Foundry**
General Shop
Metalworking: beginning, advanced
3-ply laminated frame; wire screen 8 mesh to the inch.
- 3665 Rivet Set**
General Shop
Metalworking: beginning, advanced
Set of 5; sizes #3, #4, #5, #6, #7.
- 3670 Riveter, "Pop" (set)**
Elementary
- 3675 Router, Portable, Electric**
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
 $\frac{1}{2}$ or $\frac{7}{8}$ HP; with recessed switch; $\frac{1}{4}$ " collet capacity; dual knobs;
micrometer depth adjustment; removable base; guide for straight
and circular cuts; template guide; assorted cutters as needed; with
3 conductor plug and cord.
- 3680 Rotary Machine, Combination**
General Shop
Metalworking: advanced
24 ga. capacity; depth of throat 7"; distance between shaft centers
2"; with crimping; beading; furnace offset edging; and offset rolls.
- 3685 Rule, Brass**
General Shop
Type high.
- 3690 Rule, Circumference (36")**
Metalworking: beginning, advanced
Tinnerns with liquid and dry measure dimension tables; standard
measurements to 8ths.
- 3695 Rule, Flexible, Steel tape (6')**
General Shop
Woodworking: beginning
 $\frac{1}{2}$ " replaceable blade.

- 3700 Rule, Flexible, Steel tape (8')**
 Elementary
 General Shop
 Woodworking: advanced
 1/2" replaceable blade.
- 3705 Rule, Flexible, Steel tape (10')**
 Auto and Power Mechanics: beginning, advanced
 Woodworking: beginning, advanced
 3/4"; with black markings on white background; plated steel case,
 2"W; marked both edges in 16ths; first six inches upper edge to
 32nd.
- 3710 Rule, Flexible, Steel tape (12')**
 Drafting: advanced
 Metalworking: beginning, advanced
 3/4"; with black markings on white background; plated steel case,
 2"W; marked both edges in 16ths; first six inches upper edge to
 32nd.
- 3715 Rule, Flexible, Steel tape (25')**
 Woodworking: beginning, advanced
 3/4"; with black markings on white background; plated steel case,
 2"W; marked both edges in 16ths; first six inches upper edge to 32nd.
- 3720 Rule, Flexible, Steel tape (50')**
 Woodworking: advanced
 3/4"; with black markings on white background; plated steel case,
 2"W; marked both edges in 16ths; first six inches upper edge to
 32nd.
- 3723 Rule, Flexible, Steel tape (100')**
 Drafting: advanced
 Woodworking: Beginning, advanced
 Jet black markings on 1/2" chrome-white surface; figures and gradua-
 tion bonded to line and protected by electroplating; rust resistant
 welded steel lines covered with leather; folding flush handle opened
 by push pin.
- 3725 Rule, Hook**
 Metalworking: advanced
 12"L.
- 3730 Rule, Make-up**
 Graphic Arts: beginning, advanced
 Polished tempered steel.
- 3735 Rule, Maple (24")**
 General Shop
 Brass tips.

- 3740 Rule, Short (set)**
 Metalworking: advanced
 Short set of five; with holder; 1/4" to 1".
- 3745 Rule, Steel (6")**
 Metalworking: beginning, advanced
 10ths, 100ths, 32nd, 64ths.
- 3750 Rule, Steel (12")**
 Auto and Power Mechanics: beginning, advanced
 Electricity-Electronics: beginning, advanced
 Elementary
 General Shop
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Graduated to 16th inch.
- 3755 Rule, Steel (24")**
 Metalworking: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Graduated to 16th inch.
- 3760 Rule, Steel (36")**
 General Shop
 Woodworking: beginning, advanced
 Graduated to 16th inch.
- 3765 Sand Blaster**
 Metalworking: advanced
 Booth; sand blast gun; hose.
- 3770 Sand Muller**
 Metalworking: advanced
 Capacity: approximately 25 pounds of dry material.
- 3775 Sander, Band**
 Elementary
 Portable; may also be used for grinding; band 1" x 42"; V-belt drive; complete with 1/2 HP motor; 110V AC; single-phase; 3 conductor cord.
- 3780 Sander, Belt, Portable, Electric**
 General Shop
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 3" x 24" or 4" x 24"; spur gear, belt drive, ball and needle bearings; with dust bag; 115V AC motor with 3 conductor cord.

- 3785 Sander, Combination belt and disc**
 General Shop
 Woodworking: beginning, advanced
 6" belt and 12" disc; floor model with metal stand; tilting table adjustable from 0° to 45° and slotted from mitre gauge; guarded to expose only moving sanding surfaces; tilting fence; belt adjustable to a vertical or horizontal position; motor: 1 HP, 60 cycles, 220V, 3-phase, magnetic switch and starter.
- 3790 Sander, Disc**
 Plastics: beginning, advanced
 12" minimum diameter; ¾ HP; 220V; 3-phase; tilting table or disc; mitre gauge magnetic switch and starter.
- 3795 Sander, Finishing, Portable, Electric**
 Elementary
 General Shop
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 Heavy duty; ¼" to ⅛" orbital action; abrasive paper size ½ of standard sheet; trigger switch; 3 conductor cord.
- 3800 Sander, Finishing, Portable, Air**
 Auto and Power Mechanics: advanced
 Orbital or straight line action; air driven.
- 3805 Sander, Handblock stroke**
 Woodworking: advanced
 Six inch belt with stock capacity of 4" thick and 60" long, rolling table, 1 HP heavy duty motor, dust collector hood ready for connection to exhaust system, hand block, and with 3 each of 80 and 120 grit cloth abrasive belts.
- 3810 Sander, Spindle**
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 For 9" oscillating abrasive sleeves. Throat plates and sleeves in standard sizes; table tilts to 45°; on floor stand with ½ HP 3-phase 220 motor with magnetic switch and starter.
- 3815 Sanding Drums (set)**
 Plastics: beginning, advanced
 Woodworking: beginning
 3" x 3" diameter with ½" shank; 1¾" x 2" diameter with ½" shank; 11/16" x 2½" diameter with ½" shank; 1½" x 1" diameter with ½" shank; 3" x 3" diameter with #2 Morse taper; 1½" x 1" diameter with #2 Morse taper.
- 3820 Saw, Back**
 Elementary
 General Shop

Graphic Arts: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
12".

3825 Saw, Band, Metal-cutting

Metalworking: advanced

18" capacity; saw blade capacities from 1/16" to 1" wide, approximately 12' long. With speeds of 50-2000 f.p.m.; including air blower, chip remover, tilting table, V-belt drive, assorted blade guides, and attached blade welding device; 220V, 3-phase with magnetic switch and starter.

3830 Saw, Band, Wood-cutting

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

14" floor model complete with enclosed metal base, tilting table grooved for mitre gauge, and with ball bearing guides; motor: 1/2 HP, 60 cycles, 220V, 3-phase with magnetic switch and starter.

or: 20" floor model complete with enclosed metal base, tilting table grooved for mitre gauge, foot brake, and with ball bearing guides; motor: 1 1/2 HP, 60 cycles, 220V, 3-phase with magnetic switch and starter.

3835 Saw, Circular, Power

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

10" floor model with enclosed metal base, tilting arbor, quick positioning rip fence, mitre gauge, and safety guard with splitter; motor: 1 1/2 HP, 60 cycles, 220V, 3-phase with magnetic switch and starter.

or: 12" floor model with enclosed metal base, quick positioning rip fence, mitre gauge, and safety guard with splitter; motor: 5 HP, 60 cycles, 220V, 3-phase with magnetic switch and starter.

3840 Saw, Compass (set)

Elementary

General Shop

Nest of 3 blades and 1 handle in set comprising compass keyhole and metal-cutting blade.

3845 Saw, Coping

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

6½" pin-end, screw-type handle; adjustable to any angle; rigid frame.

3850 Saw, Hack (hand)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Die cast metal handle aluminum alloy; tubular body adjustable to receive 9"-12" blade.

3855 Saw, Hack, Close quarter

General Shop

With very shallow depth, for limited clearance work.

3860 Saw, Hack, Power

General Shop

Metalworking: beginning, advanced

Plastics: advanced

Minimum capacity 6" x 6"; swivel, (adv.) vise; automatic stop; pressure feed control; automatic lift on reverse stroke, built-in coolant tank and pump; ½ HP motor; 220V; 3-phase; magnetic push button starter.

or: Minimum capacity 5" x 5" swivel vise; automatic stop; automatic lift on reverse stroke; 1/3 HP motor; 220V; 3-phase; magnetic push button starter.

3865 Saw, Hand, Crosscut

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Plastics: beginning, advanced

Woodworking: beginning, advanced

22" 10 point; straight back, highly polished, taper ground.

3870 Saw, Hand, Rip

General Shop

Woodworking: beginning, advanced

26" 5½ point; straight back, highly polished, taper ground.

3875 Saw, Jeweler's (4")

General Shop

Metalworking: beginning, advanced

4"D; adjustable frame with tension screw

- 3880 Saw, Jeweler's (6")**
Metalworking: beginning, advanced
6"D; adjustable frame with tension screw.
- 3885 Saw, Jig (scroll)**
Elementary
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
24"; complete with metal stand; motor 1/3 HP, single-phase, 60-cycle, AC, 115V; equipped with starting switch, 3 conductor cord.
- 3887 Saw, Keyhole**
Woodworking: beginning, advanced
10" taper ground blade.
- 3890 Saw, Printer's trim**
Graphic Arts: beginning, advanced
Micrometer gauge capacity, 78 pieces capacity in front of saw blade
20", 24" by undercutting; clamp open capacity 7"; clamp hold as short as 8 points; saw blade diameter, 7"; overall table dimension 18 1/2"x 22 1/2"; 1/2 HP, 220 V, 60-cycle, 3-phase motor; micrometer gauge, chip truck; 7" diameter blade; 3 trimmer bits; standard safety guards.
- 3895 Saw, Radial-arm, Power**
General Shop
Woodworking: advanced
10" saw complete with stand, table extensions, floating saw guard, exhaust nozzle, safety return reel, anti-kickback attachment, bevel positive stops of 0°, 45°, and 90°, mitre positive stops of 0°, 45° right and left; motor totally enclosed and fan cooled, 2 HP, 60 cycles, 200V, 3-phase with magnetic switch and starter.
- 3900 Saw, Sabre (bayonet)**
Elementary
General Shop
Plastics: beginning, advanced
Woodworking: advanced
Portable; heavy duty; lightweight; aluminum housing; angle adjustment base; 115V, with cord and 3 conductor cord.
- 3905 Saw, Veneer**
Woodworking: advanced
- 3910 Sawhorse**
Elementary
Approximately 24"H x 48"L; flat top 2" x 8" or 2" x 10"; for clamping material when sawing with coping saw. (Usually homemade.)

- 3915 Sawjack**
Elementary
Wood; V-cut in end; approximately $\frac{5}{8}$ " x 5" x 10". (Homemade.)
- 3925 Scale, Architect's**
Drafting: beginning, advanced
General Shop
12" triangular; boxwood; engine divided; graduations: $\frac{3}{32}$, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 3" each equalling 1'-0".
- 3930 Scale, Chalkboard (demonstration)**
Drafting: beginning, advanced
Minimum length 6' triangular; can be rotated; with mounting brackets.
- 3935 Scale, Decimal, Civil engineer's**
Drafting: advanced
General Shop
12" triangular; boxwood; engine divided; graduations: 10, 20, 30, 40, 50, 60 parts to the inch.
- 3940 Scale, Household**
Woodworking: advanced
Accuracy to $\frac{1}{4}$ ounce; capacity approximately 5 lbs.; dial adjustable to compensate for container weight.
- 3945 Scale, Laboratory**
Ceramics: beginning, advanced
Plastics: beginning, advanced
Precision accuracy; reading is graduated in both avoirdupois and metric; will weigh 100 grams; pans are of acid-resistant aluminum.
- 3950 Scale, Mechanical engineer's**
Drafting: beginning, advanced
12" triangular; boxwood; engine divided; graduations: $\frac{1}{2}$ " = 1'-0", 3" = 1'-0", $4\frac{1}{2}$ " = 1'-0", 6" = 1'-0", 9" = 1'-0", full size, 1" = 1'-0".
- 3955 Scale, Metric**
Drafting: advanced
12" triangular; plastic; engine divided; graduations: 1 cm., 2 cm., 2.5 cm., 3 cm., 5 cm.
- 3960 Scale, Triple beam**
Ceramics: beginning, advanced
310 gram capacity; direct-reading dial—10 grams to .01 gram; with 6"D removable pan, 6"D non-removable flat platform, and 12" x 6" x $2\frac{3}{4}$ " brass scoop.
- 3965 Scissors**
Auto and Power Mechanics: beginning, advanced
Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
8"; trimmer; paper shears.

- 3970 Scoop, Plaster**
Plastics: beginning, advanced
Household sugar scoop type.
- 3975 Scrape Granulator**
Plastics: advanced
Rotary knife type.
- 3980 Scraper, Cabinet**
Elementary
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
Malleable iron frame with 2 3/4" blade.
- 3985 Scraper, Carbon**
Auto and Power Mechanics: beginning, advanced
Wire blades; high quality spring steel; flexibility controlled by movable ferrule.
- 3990 Scraper, Flexible**
Ceramics: beginning, advanced
Spring steel in rectangle and half moon shapes; used for smoothing and trimming pottery shapes.
- 3995 Scraper, Hand**
Elementary
General Shop
Plastics: beginning, advanced
Woodworking: beginning, advanced
Approximately 3" x 5" steel blade.
- 4000 Scraper, Rigid**
Ceramics: beginning, advanced
For smoothing or cutting clay and plaster surfaces; scraper plain or toothed.
- 4005 Screeding Wheel**
Plastics: beginning, advanced

Shop made; none commercially available; hand operated turn table approximately 18" diameter; mounting for screeds above.

Screen, Arc welding (see: Welding Screen, Portable #5205)

4010 Screen, Projection

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

60" x 60"; vinyl mat-white; wall-mounted with brackets providing adjustment to correct for keystone effect.

4015 Screens, Halftone, Contact

Graphic Arts: beginning, advanced

Grey; magenta; pre-angled.

4020 Screwdriver, Cabinet tip

General Shop

4" and 6".

4025 Screwdriver, Clutch-head (set)

Auto and Power Mechanics: beginning, advanced

Plastic handles.

4030 Screwdriver, Insulated (set)

Electricity-Electronics: beginning, advanced

General Shop

Regular blades 3/16" and 9/32"; with 4", 6", and 8" shafts.

4035 Screwdriver, Offset, Phillips (set)

General Shop

Metalworking. advanced

4040 Screwdriver, Offset ratchet

Woodworking: beginning, advanced

4045 Screwdriver, Offset, Straight slot (set)

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced

Set with tips of 3/16", 9/32", and 11/32".

4050 Screwdriver, Phillips (set)

Auto and Power Mechanics: beginning, advanced

Drafting: beginning, advanced
Electricity-Electronics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Woodworking: beginning, advanced
Set with points #1, #2, #3.

4055 Screwdriver, Retaining type

Electricity-Electronics: beginning, advanced
3/16" blade, 1/8" shaft, straight slot.

4060 Screwdriver, Spiral ratchet

Auto and Power Mechanics: advanced
Woodworking: beginning, advanced
With replaceable bits.

4065 Screwdriver, Standard bit (changeable blades) (set)

Elementary
Set of 5; standard tips 4", 6"; cabinet tips 4", 6"; Phillips tip #1 size.

4070 Screwdriver, Standard bit (round blade) (set)

Drafting: beginning, advanced
Elementary
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Set of 5; blade widths of 3/16", 1/4", 5/16", 3/8", 1/2".

4075 Screwdriver, Standard bit (square blade) (4")

Auto and Power Mechanics: beginning, advanced
Square shank; plastic handle.

4080 Screwdriver, Standard bit (square blade) (6")

Auto and Power Mechanics: beginning, advanced
Drafting: beginning, advanced
Square shank; plastic handle.

4085 Screwdriver, Standard bit (square blade) (8")

Auto and Power Mechanics: beginning, advanced
Square shank; plastic handle.

4090 Screwdriver, Standard bit (square blade) (10")

Auto and Power Mechanics: beginning, advanced
Square shank; plastic handle.

- 4095 Screwdriver, Standard bit (square blade) (12")**
Auto and Power Mechanics: beginning, advanced
Square shank; plastic handle.
- 4100 Screwdriver, Standard bit ("stubby")**
Auto and Power Mechanics: beginning, advanced
General Shop
Square shank; plastic handle.
- 4105 Scriber**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Complete with 3 points: 1 straight, 1 short bent, 1 long bent.
- 4110 Seamer, Handy**
General Shop
Metalworking: beginning, advanced
- 4115 Sieve, Test laboratory**
Ceramics: beginning, advanced
Made to exact standards of both U.S. Bureau of Standards and The National Bureau of Standards; solid polished brass or polished tinned steel; diameter 8"; mesh sizes 30 to 120.
- 4120 Setting Down Machine**
Metalworking: advanced
- 4125 Sewing Machine**
Elementary
Portable or upright; used domestically for sewing coarse materials, light leathers, etc.
- 4130 Shaper, Metal**
General Shop
Metalworking: advanced
12" to 15" stroke; specifications to be included according to need: cutting speeds, table travel—horizontal and vertical, tool head, drive unit, lubricating system, drive unit including motor and switches, cross feed—power and hand, vise, and shaper tools.
- 4135 Shaper, Spindle (floor model)**
Woodworking: advanced
Complete with interchangeable spindles 5/16", 1/2", 3/4", and 1"; adjustable fence, hold-down guides and fence guard assembly; motor: 1 HP, 60 cycles, 220V, 3-phase, including reversible switch and over-load protection.
- 4140 Shear, Leather**
General Shop
8".

4145 Shear, Ring and circle

Metalworking: advanced

Minimum gauge: mild steel 20 ga.; minimum circle from square blanks 3 1/2" to 24".

4150 Shear, Squaring foot

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Minimum capacity mild steel 16 gauge; minimum cutting length 36" anti-pinch and toe guard.

4155 Shearing and Forming Machine, Universal

Plastics: advanced

Capacity 5/32" mild steel; throat 42"D; 1 HP, 220V, 3-phase motor; variety of cutting and forming tools.

4160 Sheet Metal Tool

Elementary

Vise grip forming and bending tool, jaw width 3/8"; throat depth 1 3/4"; length 8".

4165 Shield, Face

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Shatterproof; 6" shield; adjustable headband; hinged visor. (Must conform to ASA 22.1-1959.)

Eye shield. (For grinders) Fits all grinders; steel frame; fitted with safety glass; adjustable up, down and to tilt. (For woodworking, spot welding, metal sawing, etc.) (Lightweight, cushioned headband; full vision visor gives essential and adequate protection to face and eyes against impact; visor may be raised to set position; .040" thick, 4", 6" or 8"L. (Approved and exceed ASA Spec Z2.1-1959.)

4170 Shovel, Square point

General Shop

Metalworking: beginning, advanced

For foundry shoveling.

4175 Sifter

Ceramics: beginning, advanced

General Shop

Light weight plastic; 80 mesh screen; wire permanently sealed to plastic; twisted wire handle; small size 1" diameter, large size 2" diameter.

4180 Signal Generator

Electricity-Electronics: advanced

General Shop

Sine Wave range 20-200,000 c.p.s.; Square Wave range 60-50,000 c.p.s. RF and AF.

4185 Signal Tracer

Electricity-Electronics: beginning, advanced

Wide range demodulator; AC supply only.

4190 Sign-maker Set

Drafting: advanced

Includes guide holder, assorted guides for capital and lower case letters and numerals, brush and felt pens, and ink supply.

4195 Silk Screen Unit

General Shop

Graphic Arts: beginning, advanced

Printing frames; #12 silk; squeegee; ink; film sheets; film-cutting knives; lettering brushes; ink mixing knives; frame tape and register guides.

4200 Sinks, Developing

Graphic Arts: beginning, advanced

Temperature controlled; accommodates 3 20" x 24" trays; washer viewer; 110V AC.

4205 Sinks, Platemaking

Graphic Arts: beginning, advanced

Inside dimension 29" x 40" x 8"D; built-in spray pipe full length of sink; all-purpose side tray.

4210 Siphon, Photo

Graphic Arts: beginning, advanced

4215 Skife

Elementary

A tool for skiving leather, uses a narrow razor blade in a special frame.

4220 Slab, Inking

Elementary

Plate glass; for block printing; approximately 6" x 6" x 1/4" T or heavier; ground and polished edges for safety.

4222 Sleeves, Molder's

Metalworking: beginning, advanced

- 4225 Slick and Oval (1")**
Metalworking: beginning, advanced
- 4230 Slick and Oval (1 1/4")**
Metalworking: beginning, advanced
- 4235 Slugs (6 point) (25 lb. pkg.)**
General Shop
- 4240 Snap Fastener (set)**
Elementary
General Shop
For beginning leatherwork; hexagonal setting tool; 4" flat anvil and two bodkins.
- 4250 Snip, Aviation (left)**
Electricity-Electronics: beginning, advanced
General Shop
Metalworking: beginning, advanced
10"L; compound leverage.
- 4255 Snip, Aviation (right)**
Electricity-Electronics: beginning, advanced
General Shop
Metalworking: beginning, advanced
10"L; compound leverage.
- 4260 Snip, Aviation (combination and straight)**
Elementary
General Shop
Metalworking: beginning, advanced
10"L; compound leverage.
- 4265 Snips, Hawksbill**
General Shop
Metalworking: beginning, advanced
3" cut.
- 4270 Snips, Tin, Curved blade**
General Shop
Curved blade; 3".
- 4275 Snips, Tinner's, Straight (#8)**
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Steel laid.

- 4280 Snips, Tinner's, Straight (#10)**
Metalworking: beginning, advanced
Steel laid.
- 4285 Socket, Deep spark plug (13/16")**
General Shop
3/8" drive.
- 4290 Socket, Deep spark plug (1 1/8")**
General Shop
3/8" drive.
- Socket Wrench (see: Wrench #5255-#5470)**
- 4295 Soldering Copper, Electric (60W)**
Electricity-Electronics: beginning
Elementary
General Shop
Metalworking: beginning, advanced
Woodworking: beginning, advanced
1/4" copper tip with stand.
- 4300 Soldering Copper, Electric (200W)**
Metalworking: beginning, advanced
- 4305 Soldering Copper, Electric (300W)**
Metalworking: advanced
- 4310 Soldering Copper, Electric pencil**
Electricity-Electronics: beginning, advanced
30W; tellurium tip; 7" slim handle.
- 4315 Soldering Copper (pair) (1/2 lb.)**
Metalworking: beginning, advanced
- 4320 Soldering Copper (pair) (1 lb.)**
Metalworking: beginning, advanced
- 4325 Soldering Copper (pair) (1 1/2 lb.)**
Metalworking: beginning, advanced
- 4330 Soldering Copper (pair) (2 lb.)**
Auto and Power Mechanics: beginning, advanced
General Shop
- 4335 Soldering Gun, Electric**
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
Elementary
General Shop
Dual-heat; spotlight; 240-325W.

Soldering Iron (see: Soldering Copper #4295-#4330).

- 4340 Spacer, Leather marker**
General Shop
Size 6.
- 4345 Spaces, Assorted fonts (6 point)**
General Shop
- 4350 Spaces, Assorted fonts (8 point)**
General Shop
- 4355 Spaces, Assorted fonts (10 point)**
General Shop
Graphic Arts: beginning, advanced
- 4360 Spaces, Assorted fonts (12 point)**
General Shop
Graphic Arts: beginning, advanced
- 4365 Spaces, Assorted fonts (14 point)**
General Shop
- 4370 Spaces, Assorted fonts (18 point)**
General Shop
Graphic Arts: beginning, advanced
- 4375 Spaces, Assorted fonts (24 point)**
General Shop
- 4380 Spaces, Assorted fonts (30 point)**
General Shop
- 4385 Spaces, Assorted fonts (36 point)**
General Shop
- 4390 Sparklighter**
General Shop
Metalworking: beginning, advanced
- 4395 Spatula**
General Shop
1/2" x 3" blade.
- 4400 Spokeshave, Convex bottom**
Woodworking: beginning, advanced
Malleable iron frame.
- 4405 Spokeshave, Straight**
General Shop
Woodworking: beginning, advanced
Malleable iron frame.

- 4410 Sponge, Bulb**
General Shop
Rubber bulb; camel hair brush; 8 oz.
- 4415 Sponge, Elephant ear shape**
Ceramics: beginning, advanced
Elementary
Fine grain; for finishing clay forms. Highly absorbent; for finishing pottery; $\frac{3}{8}$ " thick average.
- 4420 Sponge, Sheep wool**
Ceramics: beginning, advanced
Natural shaped Mediterranean; 4"-5" diameter average size; soft.
- 4425 Spoon and Gate Cutter**
General Shop
1" wide; molder's tool.
- 4430 Spoons, Measuring (set)**
Elementary
- 4435 Spout, Pouring, Oil can**
Auto and Power Mechanics. beginning, advanced
1 qt.; pierce type; heavy gauge steel; hardened steel cutter for piercing oil cans; nickel plated.
- 4440 Spray Booth, Ceramic**
Ceramics: advanced
24" x 24" x 28"; with 10" electric exhaust fan; glass wool filters; with stand. (Must conform to ASA standards.)
- 4445 Spray Booth, Dry**
Ceramics: beginning, advanced
Metalworking: advanced
Plastics: beginning, advanced
Woodworking: advanced
5'W, 7'H, 4' working depth, 6'8" overall depth; constructed of #18 ga. black iron panels, each panel formed with companion flanges punched on 10" centers for bolted assembly; will have fire deflector curtain; rear of booth will be provided with a bank of (12) 20" x 20" x 2" dry paper paint arrestor filter cells; each cell to contain (2) 20" x 20" x 1" filter pads with snap-in grids; to include: 1 24" diameter exhaust fan; one $\frac{1}{2}$ HP, 220V, 60-cycle, 3-phase explosion-proof ball bearing motor; two 200W angle type explosion-proof reflectors and lamps; two light fixture mounting brackets; one 24" diameter manual damper; one 24" diameter 3'0" long exhaust stack with access door; one oil and water extractor and pressure regulator. (Must conform to ASA standards.)
Ceramics: Bench type; 20 gauge sheet metal; bolts and flanges outside of booth for easy cleaning; equipped with distributing plate to

equalize flow of air; 3'6"W x 6'1"H; working depth 1'11"; bench height 2'7"; 1/4 HP fan motor required.

4450 Spray Gun (all-materials)

Plastics: beginning, advanced

Disposable container; (requires compressed air source).

4455 Spray Gun Outfit

Auto and Power Mechanics: advanced

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced

General purpose, removable spray head, external mix, with combination nozzle for general use, complete with cup for suction feed, hose, and fittings to complement available air supply.

4460 Spray Gun, Touch-up

Ceramics: beginning, advanced

Gun body of 1. piece aluminum; plated for surface protection; gun head of drop forged bronze; needle valve of hardened steel.

4465 Spray Unit, Reinforced plastics

Plastics: advanced

Integrated segmenter for glass rovings and nozzle system to spray chopped rovings, resins, and catalyst; boom for mounting equipment; tanks for resins and catalyst; suitable pressure regulators and controls.

4475 Sprinkling Can

General Shop

Galvanized steel.

4480 Square, Combination

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

12".

4485 Square, Combination set (with protractor and center head)

Drafting: advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

12".

4490 Square, Steel framing

Electricity-Electronics: beginning, advanced

Elementary

- General Shop
 Graphic Arts: beginning, advanced
 Plastics: beginning, advanced
 Woodworking: beginning, advanced
 12" x 24".
- 4495 Square, Try (6")**
 Electricity-Electronics: advanced
 Elementary
 Woodworking: beginning, advanced
- 4500 Square, Try (8")**
 Elementary
 General Shop
- 4505 Square, Try (12")**
 Woodworking: beginning, advanced
- 4510 Stake, Beakhorn**
 General Shop
 Metalworking: beginning, advanced
- 4515 Stake, Bevel edge square**
 Metalworking: advanced
- 4520 Stake, Blowhorn**
 General Shop
 Metalworking: beginning, advanced
- 4525 Stake, Bottom**
 Metalworking: advanced
- 4530 Stake, Candle mold**
 General Shop
 Metalworking: beginning, advanced
- 4535 Stake, Conductor**
 Metalworking: advanced
- 4540 Stake, Coppersmith square**
 General Shop
- 4545 Stake, Double seaming**
 Metalworking: advanced
- 4550 Stake, Grooving**
 Metalworking: advanced
- 4555 Stake, Hatchet**
 General Shop
 Metalworking: beginning, advanced

- 4560 Stake, Hollow mandrel**
 General Shop
 Metalworking: beginning, advanced
- 4565 Stake, Needle case**
 Metalworking: advanced
- 4570 Stake, Round head**
 General Shop
 Metalworking: advanced
- 4575 Stamp, Leather**
 Elementary
 General Shop
 Following tools may be purchased singly or in sets:
 Background tools (assorted)
 Tap Bevelers
 Pear Shaders
 Turn Backs
 Veiners, Barkers
 Camouflage
 Foxtail
 Dotflare
 Mulefoot
 Stops
 Seeder
 Sun Burst
 Basket Weave
 Acorn
- Stamp, Leather; Number (see: Die, Letter #1250; Number #1255)**
- 4580 Stand, Auto safety (2 ton)**
 Auto and Power Mechanics: beginning, advanced
 2 ton capacity adjustable 15"-22"; with 10" base.
- 4585 Stand, Auto safety (7 ton)**
 Auto and Power Mechanics: beginning, advanced
 Adjustable 20"-30".
- 4590 Staple Remover**
 General Shop
- 4595 Stapler, Hand**
 Drafting: beginning, advanced
 General Shop
 Graphic Arts: beginning, advanced
 8½"; throat depth 4"; staples; pins; tacks; desk model; open
 channel load takes full strip of 210 standard staples.

- 4600 Stapler, Saddle**
 General Shop
 Graphic Arts: beginning, advanced
 Throat depth 8"; handles full size 11" x 17" sheets; attaches to table or bench.
- 4605 Stilts, Kiln**
 Elementary
 For supporting pottery while firing and glazing; assortment #1, #2, #3, #4, #5.
- 4610 Stool, Instructor's**
 Drafting: beginning, advanced
 Swivel stool; with 17" x 16" thick foam rubber seat and adjustable, padded back rest; metal seat pan; with casters; height adjustable 28" to 34"; all welded, 1" tubular steel construction with chrome plated footring; (to be used with alternate teacher's desk, standing #1165).
- 4615 Stool, Student's, Adjustable**
 Drafting: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 14" square pressed-wooded seat with back; seat perforated for ventilation; stool is all welded non-breakable construction; legs taper out to insure against tripping; legs punched to permit 3" height adjustment; seat height without adjustment, 26"; (to be used with #4670).
 or: 14" square pressed-wooded seat with back; seat perforated for ventilation; stool all welded, non-breakable construction; casters on legs; legs punched to permit 3" height adjustment; seat height without adjustment 18"; (to be used with alternate drafting table specifications #4670).
- 4620 Stop, Bench**
 General Shop
 To fit $\frac{3}{4}$ " hole.
- 4625 Storage Unit, Clay**
 Ceramics: beginning, advanced
 Portable; of birch plywood, lined with galvanized steel; hinged top; bottom fitted with heavy duty casters; outside dimensions 24" x 24" x 28½"H.
 Storage Unit, Sheet plastics (see: Cabinet, Sheet plastics storage #0610).
- 4635 Straight Edge, Parallel ruling**
 Drafting: advanced
 Transparent plastic edges.
- 4640 Strap, Battery**
 Auto and Power Mechanics: beginning, advanced
 12"L; heavy duty.

- 4650 String Holder, Cone**
Graphic Arts: beginning, advanced
2½ lb. cord.
- 4655 Strip heater**
Elementary
General Shop
Plastics: beginning, advanced
23" minimum length; 110V, 250 watts; switch and pilot light.
- 4660 Surfacers (single surface planer)**
General Shop
Woodworking: advanced
12" x 5" capacity; floor model; with enclosed metal base; with infeed and speed control; with clutch; motor driven; motor: 3 HP, 60 cycles, 220V, 3-phase; with switch and overload protection.
or: 18" or 20" capacity; floor model with enclosed metal base; with infeed and speed control with clutch and motor driven; and with sectional top infeed rolls and chip breaker; motor: 5 HP, 60 cycles, 220V, 3-phase with switch and overload protection.
- 4665 Table, Blueprint**
General Shop
24" x 60"; with drawer.
- 4670 Table, Drafting**
Drafting: beginning, advanced
General Shop
Metalworking: beginning, advanced
Woodworking: beginning, advanced
Overall size approximately 38" x 28" x 39"H; material either wood or metal; 4 post type; drafting surface maple top with zinc-plated steel end cleats, 28½" x 28½", adjustable height with fixed reference surface 10" x 28½". Board storage unit holds 6 boards up to 20" x 26", hardboard dividers, overall size approximately 11" x 28" x 23"; six-drawer storage unit for instruments and material storage, equipped with master-keyed locks, overall unit size approximately 11" x 28" x 23", all drawers 9"W x 3½"H x 17"L. (To be used with 4615).
or: Overall size approximately 37½" x 48" x 29"H; material of wood; 4 post type; drafting surface maple top with zinc-plated steel end cleats, size 36" x 48", adjustable height to 60°; six-drawer storage unit for instruments and material storage, equipped with master-keyed locks, overall unit size approximately 11" x 28" x 23", all drawers 9"W x 3½"H x 17"L; no board storage unit. (To be used with alternate 4615).
- 4675 Table, Finishing**
Woodworking: beginning, advanced

1 1/4" x 24" x 60" plywood top; covered with 22 gauge galvanized steel folded over and fastened underneath; heavy maple frame; 3/4" shelf with backstop.

4680 Table, General purpose

Graphic Arts: beginning, advanced

Table cabinet; heavy gauge steel; finished olive green or grey; hardwood top; sliding doors with nylon bearings and master-keyed cylinder lock; 30"D x 33"H in 5 or 6 foot lengths.

4685 Table, Opaquing

Graphic Arts: beginning, advanced

Beginning: adjustable light table; machine steel straight edges on 4 sides; non-glare glass; working area of 10" x 25".

Advanced: adjustable light table; 2 straight edges mounted on roller-bearing chains, right angles to each other; scales calibrated in 1/32"; 3-way fluorescent light system; working area 24" x 36".

4690 Table, Overhead projector

Auto and Power Mechanics: beginning, advanced

Ceramics: beginning, advanced

Drafting: beginning, advanced

Electricity-Electronics: beginning, advanced

Elementary

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

Portable; 26"H for stand-up height operation; 1 shelf near base; electrical accessory U.L. approved, 20', #16 3-wire cord with double receptacle; mounted on 4 casters, 2 with braking mechanism.

4695 Table, Pilot press

Graphic Arts: beginning, advanced

Holds press, type chases and supplies; top covered with stainproof micarta; 24" x 48" x 31".

4700 Table, Planning

Drafting: advanced

72" x 30" x 30"H; 1" OD cold rolled steel tubing legs with non-marring feet; steel locking device for each leg; laminated plastic top with aluminized plastic edge strip around perimeter of table top.

4705 Table, Casting

Ceramics: beginning, advanced

Top of 1" wood; crossmembers of aluminum; waste tray catches excess slip; removable for easy cleaning; welded angle-iron construction; 8' x 2' x 32"H.

- 4715 Table, Spraying**
Woodworking: advanced
Top constructed of 2" x 8" fir; glued and cut to 50" diameter; Lazy Susan bearing attached to underside; construct two stands, one 24"H and one 8"H.
- 4720 Table, Typewriter**
Graphic Arts: beginning, advanced
Heavy weight table; lever control retractable casters; non-skid top; spring action drop leaves; 48½" x 25" x 26".
- 4725 Tachometer**
Auto and Power Mechanics: advanced
Tach-dwell meter; 6-12-24V; 0-5000 RPM; 2 ranges; scales for 4, 6 and 8 cylinder engines.
- 4730 Tanks, Film development**
Graphic Arts: beginning, advanced
For roll film from 16mm to 120-620 size; reel adjustable for various sizes and with ratchet feature.
- 4735 Tank, Agitated storage**
Ceramics: beginning, advanced
Made of heavy carbon steel, porcelain lined; with agitator shaft and stirrers of stainless steel; tank size 42" x 42"; 50 RPM stirrer shaft; 1 HP motor; approximately 240 gal. capacity.
- 4740 Tank, Hot boiling**
Auto and Power Mechanics: advanced
- 4745 Tank, Parts cleaning, Solvent**
Auto and Power Mechanics: beginning, advanced
Fusible link safety cover; flexible metal flush hose; 1/3 HP; pumping unit @ 65 gal./min.; oil filter; removable sludge trays off-on pilot light; casters; 40 gal. capacity.
- 4750 Tank, Storage, Slip**
General Shop
- 4755 Tap and Die, Machine screw (set)**
Metalworking: beginning, advanced
Including the following sizes: 4 x 36, 6 x 32, 8 x 32, 10 x 24, 10 x 32, 12 x 24, ¼ x 20.
- 4760 Tap and Die, NC (U.S. standard) (set)**
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
1 each—taper, plug, and bottoming tap plus one die in following

sizes: $\frac{1}{4}$ " x 20, $\frac{5}{16}$ " x 18, $\frac{3}{8}$ " x 16, $\frac{7}{16}$ " x 14, and $\frac{1}{2}$ " x 13;
complete with die stock and tap wrench.

4765 Tap and Die, NF (S.A.E.) (set)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Plastics: beginning, advanced

1 each—taper, plug, and bottoming tap plus one die in following
sizes: $\frac{1}{4}$ " x 28, $\frac{5}{16}$ " x 24, $\frac{3}{8}$ " x 24, $\frac{7}{16}$ " x 20, and $\frac{1}{2}$ " x 20;
complete with die stock and tap wrench.

4770 Tap and Die, Pipe (set)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

Metalworking: beginning, advanced

Tap, die, and reamer for following pipe sizes: $\frac{1}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", and 1".

4775 T Bevel, Sliding

Drafting: advanced

Elementary

Plastics: beginning, advanced

Woodworking: beginning, advanced

6"; iron handle.

4780 Template, Architectural

Drafting: advanced

House-plan and plumbing template; scale: $\frac{1}{4}$ " = 1'0" and $\frac{1}{8}$ " =
1'0"; size 5" x 7" x .030; non-discoloring plastic.

4785 Template, Electronic

Drafting: advanced

NASA standard electrical drafting templates; size $5\frac{1}{4}$ " x 8" x .060;
non-discoloring plastic.

4790 Template, Isometric circle

Drafting: advanced

38 ellipses from $\frac{1}{8}$ " to $1\frac{9}{16}$ "; .040 thick; non-discoloring plastic.

4795 Template, Isometric circle (large)

Drafting: advanced

25 ellipses $1\frac{1}{2}$ " to 2" in increments of $\frac{1}{8}$ "; 2" to 7" in increments
of $\frac{1}{4}$ "; .080 thick; non-discoloring plastic.

4800 Template, Large circle

Drafting: advanced

Circle and radius master; 36 circles from $\frac{3}{64}$ " to 1" in diameter;
with 24 semi-circles ranging from 1" diameter to $7\frac{1}{2}$ " diameter; size
 $7\frac{1}{2}$ " x 10" x .080; non-discoloring plastic.

4805 Template, Nuts and bolts

Drafting: advanced

Contains elevation views of socket head, flat head, and fillister head, cap screws, American standard hex head and bolts, and socket head stripper bolts including end screws; drill point and countersink cut out for angles of 82°, 90°, 100°, 118°, and 135°; size 5" x 10-7/16" x .030"; non-discoloring plastic.

4810 Tension Tester, Core

Metalworking: advanced

4815 Tester, Battery cell

Auto and Power Mechanics: beginning, advanced

(Battery-Starter Tester) ammeter range 0-400 Amps; 3 Voltmeter scales, 0-16, 0-8, 0-4 V; 6 and 12 V systems; with test leads and stand.

4820 Tester, Coil and condenser

Auto and Power Mechanics: advanced

6-12-24 V; portable; fused.

4825 Tester, Distributor

Auto and Power Mechanics: advanced

1/4 HP distributor drive operating from idle to 6000 RPM; 12" diameter strobe light rings graduated in divisions of 1°; precision meters (2% full deflection); tachometer 0-3000 distributor RPM; dwell meter 0-45° for 6 and 8 cylinder distributor, 0-90° for 4 cylinder distributors; vacuum pump (up to 21"H); condenser tester.

4830 Tester, Guided bend

Plastics: advanced

Maximum rated ram force 10,000 lbs.; stroke 5"; capacity 3/8" x 2" cross section; ram radius 3/4" (cyanided); roller diameter 1 1/2" (cyanided).

4835 Tester, Hardness

Metalworking: advanced

Plastics: advanced

Bench; Rockwell system of regular hardness tests 10 to 150 kg. and superficial tests 3 to 45 kg.

Plastics: requires M scale—1/4" ball, 10-100 kg loads; R scale, 1/2" ball, 10-60 kg loads.

4840 Tester, Neon lamp type

General Shop

90-550V AC-DC.

4845 Tester, Radiator pressure

Auto and Power Mechanics: beginning, advanced

Plunger action; to fit all cars; test radiator caps and cooling system;

heavy die cast body; steel latching gears; high quality pump; easy to read gauge.

4850 Tester, Transistor

Electricity-Electronics—beginning, advanced
Short, leakage, and forward current tests.

4855 Tester, Tube

Electricity-Electronics: beginning, advanced
General Shop
Mutual conductance type.

4860 Testing Machine, Tensile

Plastics: advanced
Maximum rated capacity 40,000 lbs.; stroke 4"; tow socket 1½"D x 1¾"W; handle 18"L toggle action.

4865 Testing Machine, Universal

Plastics: advanced
Tests properties of tensile, compression, shear, transverse, hardness, and modulus of elasticity; materials: metal, wood, plastics, ceramics, cements, fasteners, and fabrics; 5" ram travel; 12" precision read-out gauge; overall 34"L x 12"W x 11"H; maximum rated capacity 40,000 lbs.; maximum specimen size (with standard jaws): 5/8" x 1½" x 10"; jaw socket 1½"D x 1¾"W at front 30° included angle x 3"L; maximum clearing width between jaws 6⅝"; handle 18"L with toggle action; material of welded steel; self-containing hydraulic ram unit.

4870 Thermoforming Press, Vacuum (large)

Plastics: beginning, advanced
Approximate maximum sheet size 24" x 36"; 220V, 3-phase heaters; vacuum pump and surge tank minimum capacity 5 gal.; automatic or semi-automatic cycles.

4875 Thermoforming Press, Vacuum (medium)

General Shop
Plastics: advanced
Approximate maximum sheet size 16" x 16"; 220V, single-phase heater; vacuum and pressure pump and tanks.

4880 Thermoforming Press, Vacuum (small)

Elementary
Plastics: beginning, advanced
Approximate maximum sheet size 8" x 8"; 110V heater; manual vacuum pump.

4885 Thermometer, Photographic

Graphic Arts: beginning, advanced
Tank and tray thermometer; pivoted spring clip; scale from 30°F to 140°F, in 2 increments; 4⅞"L.

- 4890 Threading Tool, Lathe**
Metalworking: advanced
For formed cutters; V-thread
- 4895 Throwing Ribs, Wood (set)**
Ceramics: beginning, advanced
Hand formed, rubbed walnut; with finger holes for easy handling;
3 shapes.
- 4900 Timer, Interval**
Plastics: beginning, advanced
120 minute capacity by seconds.
- 4905 Timer, Photographic (electric)**
Graphic Arts: beginning, advanced
Luminous universal timer; marked with phosphorescent numbers;
time from 1 sec. to 60 min.; automatically controls enlarger ex-
posures; built-in electric buzzer; outlet receptacle is controlled by
selector switch, makes or breaks circuit at zero. Properly grounded
for safe use.
- 4910 Timer, Photographic (spring wound)**
Graphic Arts: beginning, advanced
30 minute photographic bell timer; times in minutes up to 30
minutes.
- 4915 Tongs, Blacksmith, Curved lip**
General Shop
Metalworking: beginning, advanced
To hold rounds. 20"L.
- 4920 Tongs, Crucible**
General Shop
17"L.
- 4925 Tongs, Pick-up**
General Shop
Metalworking: beginning, advanced
Flat lips, 24"L.
- 4930 Tool, Drag link and shock arm**
Auto and Power Mechanics: advanced
- 4935 Tool Holder, Lathe (left hand)**
Auto and Power Mechanics: beginning, advanced
Metalworking: beginning, advanced
To fit tool post of lathe orderd.
- 4940 Tool Holder, Lathe (right hand)**
Auto and Power Mechanics: beginning, advanced
Metalworking: beginning, advanced
To fit tool post of lathe ordered.

- 4945 Tool Holder, Lathe (straight)**
 Auto and Power Mechanics: beginning, advanced
 Metalworking: beginning, advanced
 To fit tool post of lathe ordered.
- 4950 Torch, Gas**
 General Shop
 Metalworking: beginning, advanced
 Natural gas and air. (Must conform to ASA standards.)
- 4955 Torch, Propane (kit)**
 Auto and Power Mechanics: Advanced
 General Shop
 With assorted tips for heating and soldering.
- 4960 Tracer**
 General Shop
 Stylus for leather.
- 4965 Trammel Points**
 General Shop
 Metalworking: beginning, advanced
 Woodworking: beginning, advanced
 Hardened points plus pencil holder to be attached to straight stick.
- 4970 Transformer, Bell**
 General Shop
 Primary: 110-115V AC; Secondary: 6, 12, and 18V.
- 4975 Transformer, Step-down**
 Auto and Power Mechanics: advanced
- 4980 Transformer, Step-up**
 Auto and Power Mechanics: advanced
Transmission Maintenance Set (See: Automatic Transmission Tool #0075).
- 4985 Tray, Photographic**
 Graphic Arts: beginning, advanced
 Hard rubber; non-corrosive; slip-proof; specially reinforced rims and bottoms; used interchangeably for all photographic pocesses without danger to prints or negatives; 11" x 14".
- 4990 Triangle, 30°-60° (8")**
 Drafting: beginning
 General Shop
 Graphic Arts: beginning, advanced
 Woodworking: beginning, advanced
 Acrylic plastic; .080" thick; with finger lifts.

- 4995 Triangles, 30°-60° (10" and 12")**
 Drafting: advanced
 One each 10" and 12"; acrylic plastic; .080" thick; with finger lifts.
- 5000 Triangle, 45° (6")**
 Drafting: beginning
 Graphic Arts: beginning, advanced
Drafting: acrylic plastic; .080" thick; with finger lifts.
Graphic Arts: stainless steel; solid center with lifting knob.
- 5005 Triangle, 45° (8")**
 Drafting: advanced
 General Shop
 Woodworking: beginning, advanced
 Acrylic plastic; .080" thick; with finger lifts.
- 5010 Triangle, 45° (12")**
 Drafting: advanced
 Acrylic plastic; .080" thick; with finger lifts.
- 5015 Triangle, Adjustable (10")**
 Drafting: advanced
 Transparent acrylic plastic; .100" thick; graduated to 1/2°; numbered every 10° from 0° to 45°; magnifier setting.
- 5020 Triangle, Chalkboard, 30°-60°**
 Drafting: beginning, advanced
 General Shop
 24" hardwood; with magnets, holding knob and hanger hole.
- 5025 Triangle, Chalkboard, 45°**
 Drafting: beginning, advanced
 Hardwood; with magnets, holding knob and hanger hole.
- 5030 Triangle, Kiln**
 Elementary
 For supporting pottery when firing and glazing; assortment #1, #2, #3, #4, #5.
- 5035 Trimmer, Paper**
 Graphic Arts: beginning, advanced
 Guides adjust to any position; blade hook for safety; ruled in 1/2" squares; 24" x 24" table.
- 5040 Trivets**
 Ceramics: beginning, advanced
 General Shop
 Heat resistant; stainless steel; two types: one complete in itself, other is bolted to firing rack.

- 5045 Trowel, Foundry**
General Shop
Metalworking: advanced
- 5050 Trowel, Square, Molder's**
General Shop
- 5055 Trowel, Taper (heart) and leaf, Molder's**
General Shop
- 5060 Truck, Bindery**
Graphic Arts: advanced
All metal; 4 pivoting shelves; ball bearing rubber wheels for complete maneuverability; 28" x 40".
- 5065 Truck, Welding cylinder**
Auto and Power Mechanics: advanced
General Shop
Metalworking: beginning, advanced
Plastics: advanced
Size appropriate to gas bottle size.
- 5070 T Square**
Drafting: beginning, advanced
General Shop
Graphic Arts: beginning, advanced
Woodworking: beginning, advanced
Fixed head; hardwood head and blade; with transparent plastic edges along upper and lower blade; with hang hole; minimum size 24".
- 5075 Tumbler, Lapidary**
Elementary
Steel drum; 25 lb. capacity; 1/4 HP motor; 115V AC, 60-cycle, single-phase; complete with cord and plug.
Turning Tool (set) (See: Wheel Turning Tool #5245)
Turning Tools, Metal lathe (set) (See: Tool Holder, Lathe #4935-#4945).
- 5080 Tweezers, Bevel point**
General Shop
- 5085 Tweezers, Type**
General Shop
Graphic Arts: beginning, advanced
4 1/2"; fine point; nickel plated.
- 5090 Type (assorted sizes and styles—see listing—next page)**
General Shop
Graphic Arts: beginning, advanced

FONTS OF FOUNDRY TYPE, SPACES AND QUADS RECOMMENDED FOR GRAPHIC ARTS

Size	Roman					Square Serif				Sans Serif				Spaces & Quads	
	Oldstyle	OS Italic	Mod.	Mod. It.	Text	Reg.	Italic	Reg.	Italic	Reg.	Italic	Script	Decorative	No. of Fonts	
6 pt.	2	2	2	2	2	2	2	2	2	2	2			10	
8	2	2	2	2	2	2	2	2	2	2	2			10	
10	2	2	2	2	2	2	2	2	2	2	2			10	
12	2	2	2	2	2	2	2	2	2	2	2		2	10	
14	2	2	2	2	2	2	2	2	2	2	2	2	2	12	
18	2	2	2	2	2	2	2	2	2	2	2	2	2	12	
24	2	2	2	2	2	2	2	2	2	2	2	2	2	12	
30															
36	2	2	2	2	2	2	2	2	2	2	2	2	2	12	
48	2		2			2	2	2	2	2	2	2	2	10	
72	2		2			2	2	2	2	2	2	2	2	10	
Wood	2					2	2	2	2	2	2	2	2	10	
8 line	1					1									
10	1					1									
12	1					1									
15	1					1									

Plus 1 font per student of monotype, for basic instruction.

FONTS OF FOUNDRY TYPE, SPACES AND QUADS RECOMMENDED FOR GENERAL SHOP

Size	Roman					Square Serif				Sans Serif				Spaces & Quads	
	Oldstyle	OS Italic	Mod.	Mod. It.	Text	Reg.	Italic	Reg.	Italic	Reg.	Italic	Script	Decorative	No. of Fonts	
10	1	1	1	1		1	1	1	1	1	1			10	

5095 Typesetter, Linecasting

Graphic Arts: advanced

Tape operated; single distribution; 3 main magazines; selectro-matic quadder, mold cooler and metal feeder; 220V AC.

5100 Typesetter, Photo-headsetter

Graphic Arts: advanced

Sets type and lettering to 175 point sizes; projection system permits 200% enlargement to 400% reduction from a single film font; develops inside the machine; condense, expand, blackslant or italicize to varying degrees; 2800 variations in sizes, slants, and proportions are possible from a single film font.

5105 Typewriter, Electric

Graphic Arts: advanced

Writing line 13"; paper width 15½"; suitable for all office and printing needs; stationary carriage and removable ball of type that moves across the page; selection of different type faces available.

5110 Typewriter, Standard

Graphic Arts: beginning

Standard keyboard; pica or elite type (school should specify size and type face); 12" carriage.

Vacuum Forming Machine (See: Thermoforming Press, Vacuum (small) #4880).

5115 Vacuum Printing Frame

Graphic Arts: advanced

17" x 21" working area; vacuum pump; 110V, 60-cycle motor; gauge; vacuum release valve.

Valve Seat Grinder (See: Grinder, Valve #1995)

Valve Refacer (See: Refacer, Valve #3615)

5120 V Block and Clamps (set)

Metalworking: beginning, advanced

Plastics: beginning, advanced

5125 Veiner, Leather stamp

Elementary

5130 Vise, Angle, Drill

Metalworking: beginning, advanced

Capacity of opening 2¼" (beginning); capacity of opening 3" (advanced).

5135 Vise, Bench, Drill

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced

Capacity of opening 3".

- 5140 Vise, Machinist's bench**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Metalworking: beginning, advanced
 Swivel base; 3" jaw; 4 3/4" opening.
- 5145 Vise, Mitre**
 Woodworking: beginning, advanced
- 5150 Vise, Pin (set)**
 Metalworking: beginning, advanced
 Range 0" to .125" minimum.
- 5152 Vise, Pipe**
 Metalworking: beginning, advanced
- 5155 Vise, Sheet Metal**
 General Shop
 Smooth jaw; 3" opening.
- 5160 Vise, Swivel**
 General Shop
 2" jaw; rapid positioning.
- 5165 Vise, Woodworker's**
 Elementary
 General Shop
 Portable; clamp-on type; for miscellaneous use other than regular work bench vise.
- 5170 Ware Truck**
 Ceramics: beginning, advanced
 Welded angle-iron construction; rubber-tired swivel casters; 8 shelves
 22" x 28".
- 5175 Wedging Boards**
 Ceramics: beginning
 22" x 15" x 14"H; or 12" x 15" x 2"T hard plaster bat.
- 5180 Wedging Table**
 Ceramics: beginning, advanced
 General Shop
- 5185 Welder, Arc**
 Auto and Power Mechanics: advanced
 General Shop
 Metalworking: beginning, advanced
 Plastics: advanced
 AC/DC. (Must conform to ASA standards.)

- 5190 Welder, MIG**
Metalworking: advanced
- 5195 Welder, Spot**
Electricity-Electronics: beginning, advanced
Metalworking: beginning, advanced
- 5200 Welder, Spot (portable)**
General Shop
220V; 10' power cable; with standard tongs.
- 5205 Welder, TIG**
Metalworking: advanced
- Welding Helmet (See: Helmet, Welding #2145)**
- 5220 Welding Outfit, Oxy-acetylene**
Auto and Power Mechanics: advanced
General Shop
Metalworking: beginning, advanced
Plastics: advanced
Including regulators, torch, set of tips, cutting attachment and set of tips: twin hose.
- 5225 Welding Screen, Portable**
Auto and Power Mechanics: advanced
General Shop
Back 6' x 6'; wings 3'. Tubular frame construction; replaceable fireproof curtains. Hinged wings.
- 5230 Welding Unit, Plastics**
Plastics: beginning, advanced
Hand welder and tacker; 110V; assorted tips; air regulator and pressure gauges; carrying case.
- 5235 Wheel Alignment Set**
Auto and Power Mechanics: advanced
Gauges for: all magnetic—toe in, caster angle, camber angle, Easter-king pin angle; turntable set; trammel bar; tirescriber; etc.
- 5240 Wheel Balancer**
Auto and Power Mechanics: advanced
(On the car); 1¼ HP, 7500 RPM, 110V AC motor; spins wheel over 100 MPH; quick action brake; foot motor control; wheel adapter for 13"-16" wheels.
- Wheel Dresser (see: Dresser, Abrasive wheel #1320)**
- 5245 Wheel Turning Tool (set)**
Ceramics: beginning, advanced
Set of 6 different shapes for working on the potter's wheel for turning down plaster or clay pieces; length of tools 9¼".

- 5250 Wire Cutter and Stripper**
General Shop
- 5255 Wrench, Adjustable end (6")**
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
General Shop
Graphic Arts: beginning, advanced
Metalworking: beginning, advanced
Plastics: beginning, advanced
 $\frac{3}{4}$ " maximum opening; forged steel; satin-chrome finish.
- 5260 Wrench, Adjustable end (8")**
Auto and Power Mechanics: beginning, advanced
Elementary
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning
 $\frac{15}{16}$ " maximum opening; forged steel; satin-chrome finish.
- 5265 Wrench, Adjustable end (10")**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: advanced
Plastics: beginning, advanced
 $1\frac{1}{8}$ " maximum opening; forged steel; satin-chrome finish.
- 5270 Wrench, Adjustable end (12")**
Auto and Power Mechanics: beginning, advanced
General Shop
Metalworking: advanced
Plastics: beginning, advanced
 $1\frac{5}{16}$ " maximum opening; forged steel; satin-chrome finish.
- 5275 Wrench, Adjustable end (monkey)**
Auto and Power Mechanics: beginning, advanced
- 5280 Wrench, Allen key (hex) (set)**
Auto and Power Mechanics: beginning, advanced
Electricity-Electronics: beginning, advanced
General Shop
Metalworking: beginning, advanced
Plastics: beginning, advanced
Woodworking: beginning, advanced
Set including 11 standard sizes, #1 $\frac{1}{2}$ -#12.

- 5285 Wrench, Box (set)**
Metalworking: beginning, advanced
Range of openings: $\frac{3}{8}$ "-1"; satin-chrome finish.
- 5290 Wrench, Combination box and open end (set)**
Auto and Power Mechanics: beginning, advanced
General Shop
Range of openings: $\frac{3}{8}$ "-1"; satin-chrome finish.
- 5295 Wrench, Combination box and open end (metric) (set)**
Auto and Power Mechanics: beginning, advanced
Set of 10; sizes: 6, 8, 9, 10, 12, 13, 14, 15, 17, 19mm; 12 point box-end opening; for foreign cars; satin-chrome finish.
- 5300 Wrench, Deep socket ($\frac{3}{8}$ " drive) (set)**
Auto and Power Mechanics: beginning, advanced
8-6 point sockets; sizes $\frac{3}{8}$ "-9/16" are 1 $\frac{3}{4}$ "L; sizes $\frac{5}{8}$ "-13/16" are 2 $\frac{1}{2}$ "L; incremented by 16ths; satin-chrome finish.
- 5305 Wrench, Deep socket ($\frac{1}{2}$ " drive) (set)**
Auto and Power Mechanics: beginning, advanced
8-12 point sockets; 3 $\frac{1}{4}$ "L; sizes $\frac{1}{2}$ "-15/16"; incremented by 16ths; satin-chrome finish.
- 5310 Wrench, Drain plug**
Auto and Power Mechanics: beginning, advanced
Contains common male and female plug sizes for crankcase, transmission, and differential; satin-chrome finish.
- 5315 Wrench, Flare nut (set)**
Auto and Power Mechanics: advanced
Combination open end and hex flare nut wrenches; sizes: $\frac{3}{8}$ ", 7/16", $\frac{1}{2}$ ", 9/16", $\frac{5}{8}$ "; satin-chrome finish.
- 5320 Wrench, Ignition (set)**
Auto and Power Mechanics: beginning, advanced
General Shop
6 open end wrenches; sizes: 15/64", $\frac{1}{4}$ ", 9/32", 5/16", 11/32", $\frac{3}{8}$ "; with kit bag.
- 5325 Wrench, Lug**
Auto and Power Mechanics: beginning, advanced
- Wrench, Monkey (see: Wrench, Adjustable end (monkey) #5275)**
- 5330 Wrench, Nutdriver (set)**
Electricity-Electronics: beginning, advanced
General Shop
Set of 8 drivers; sizes: 3/16", $\frac{1}{4}$ ", 9/32", 5/16", 11/32", $\frac{3}{8}$ ", 7/16", $\frac{1}{2}$ "; color coded handles.
- 5335 Wrench, Open end (set)**
Electricity-Electronics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Woodworking: beginning, advanced

Double end wrenches; sizes: 1/4"-1"; satin-chrome finish.

5340 Wrench, Pipe (10")

Auto and Power Mechanics: beginning, advanced

General Shop

Metalworking: beginning, advanced

Heavy duty malleable frame; steel alloy jaws.

5345 Wrench, Pipe (14")

Metalworking: advanced

Heavy duty malleable frame; steel alloy jaws.

5350 Wrench, Pipe (18")

Auto and Power Mechanics: advanced

General Shop

Metalworking: advanced

Heavy duty malleable frame; steel alloy jaws.

5355 Wrench, Socket (1/4" drive) (set)

Auto and Power Mechanics: beginning, advanced

9-6 point standard sockets, sizes: 3/16"-1/2" by 32nds; 2-8 point standard sockets, 1/4" and 5/16"; 1 spinner handle; 2 extensions, 2" and 6"; 1 ratchet handle; 1 universal joint; satin-chrome finish.

5360 Wrench, Socket (3/8" drive) (set)

Auto and Power Mechanics: beginning, advanced

Electricity-Electronics: beginning, advanced

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

Plastics: beginning, advanced

Woodworking: beginning, advanced

10 piece set; 7 standard sockets, sizes: 3/8"-3/4" by 16ths; 1 flex handle 8 1/2"L; 1 extension 3"L; 1 reversible ratchet handle 7"L; with metal box; satin-chrome finish.

5365 Wrench, Socket (1/2" drive) (set)

Auto and Power Mechanics: beginning, advanced

General Shop

Graphic Arts: beginning, advanced

Metalworking: beginning, advanced

9 piece set; 7 standard sockets, sizes: 3/8"-3/4" by 16ths; 1 extension 5"L; 1 reversible ratchet handle 10 1/4"L; with metal box; satin-chrome finish.

- 5370 Wrench, Socket (metric) (set)**
Auto and Power Mechanics: advanced
1/2" drive for foreign cars; 9-12 point sockets, sizes: 9mm to 22mm;
2 extensions, 6" and 10"; 1 speeder handle 18"L; 1 flex handle
15"L; 1 crossbar; 1 ratchet handle 9 3/4"L; satin-chrome finish.
- 5375 Wrench, Socket, Flex handle (3/8" drive)**
Auto and Power Mechanics: advanced
7 1/2"L; for use with 3/8" drive socket wrench set; satin-chrome finish.
- 5380 Wrench, Socket, Flex handle (1/2" drive)**
Auto and Power Mechanics: advanced
16"L; for use with 1/2" drive socket wrench set; satin-chrome finish.
- 5385 Wrench, Socket, Handle extension (3/8" drive) (4")**
Auto and Power Mechanics: beginning, advanced
For use with 3/8" drive socket wrench set; satin-chrome finish.
- 5390 Wrench, Socket, Handle extension (3/8" drive) (8")**
Auto and Power Mechanics: beginning, advanced
For use with 3/8" drive socket wrench set; satin-chrome finish.
- 5395 Wrench, Socket, Handle extension (3/8" drive) (set)**
Auto and Power Mechanics: beginning, advanced
Set of 4; sizes: 3", 6", 10", 20"; for use with 3/8" drive socket wrench
set; satin-chrome finish.
- 5400 Wrench, Socket, Handle extension (1/2" drive) (3")**
Auto and Power Mechanics: beginning, advanced
For use with 1/2" drive socket wrench set; satin-chrome finish.
- 5405 Wrench, Socket, Handle extension (1/2" drive) (8")**
Auto and Power Mechanics: beginning, advanced
For use with 1/2" drive socket wrench set; satin-chrome finish.
- 5410 Wrench, Socket, Handle extension (1/2" drive) (set)**
Auto and Power Mechanics: beginning, advanced
Set of 4; sizes: 3", 6", 10", 20"; for use with 1/2" drive socket wrench
set; satin-chrome finish.
- 5415 Wrench, Socket, Reversible ratchet handle (1/4" drive)**
Auto and Power Mechanics: beginning, advanced
Included in Wrench, Socket (1/4" drive) (set) #5360. May be ordered
separately; satin-chrome finish.
- 5420 Wrench, Socket, Reversible ratchet handle (3/8" drive)**
Auto and Power Mechanics: beginning, advanced
General Shop
Included in Wrench, Socket (3/8" drive) (set) #5365. May be ordered
separately; satin-chrome finish.

- 5425 Wrench, Socket, Reversible ratchet handle ($\frac{1}{2}$ " drive)**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Included in Wrench, Socket ($\frac{1}{2}$ " drive) (set) #5370. May be ordered separately; satin-chrome finish.
- 5430 Wrench, Socket, Speed handle ($\frac{1}{4}$ " drive)**
 Auto and Power Mechanics: beginning, advanced
 16"L; for use with $\frac{1}{4}$ " drive socket wrench set; satin-chrome finish.
- 5435 Wrench, Socket, Speed handle ($\frac{3}{8}$ " drive)**
 Auto and Power Mechanics: beginning, advanced
 16 $\frac{7}{8}$ "L; for use with $\frac{3}{8}$ " drive socket wrench set; satin-chrome finish.
- 5440 Wrench, Socket, Speed handle ($\frac{1}{2}$ " drive)**
 Auto and Power Mechanics: beginning, advanced
 18"L; for use with $\frac{1}{2}$ " drive socket wrench set; satin-chrome finish.
- 5445 Wrench, Socket, Universal joint attachment ($\frac{1}{4}$ " drive) (set)**
 Auto and Power Mechanics: advanced
 For use with $\frac{1}{4}$ " drive socket wrench set; satin-chrome finish.
- 5450 Wrench, Socket, Universal joint attachment ($\frac{3}{8}$ " drive) (set)**
 Auto and Power Mechanics: beginning, advanced
 For use with $\frac{3}{8}$ " drive socket wrench set; 1 $\frac{7}{8}$ "L; satin-chrome finish.
- 5455 Wrench, Socket, Universal joint attachment ($\frac{1}{2}$ " drive) (set)**
 Auto and Power Mechanics: beginning, advanced
 For use with $\frac{1}{2}$ " drive socket wrench set; 2-5/16"L; satin-chrome finish.
- 5460 Wrench, Tappet (set)**
 Auto and Power Mechanics: beginning, advanced
 Set includes 2 each: 7/16" and $\frac{1}{2}$ ", 12" and 9/16", $\frac{5}{8}$ " and 11/16".
- 5465 Wrench, Torque ($\frac{3}{8}$ " drive)**
 Auto and Power Mechanics: beginning, advanced
 General Shop
 Flexible beam; job molded aluminum handle; easy to read scale; measures foot-pounds or inch-pounds in either direction; 150 ft.-lbs. range in 10 ft.-lbs. divisions or 150 in.-lbs. range in 5 in.-lbs. divisions.
- 5470 Wrench, Torque ($\frac{1}{2}$ " drive)**
 Auto and Power Mechanics: beginning, advanced
 Flexible beam; job molded aluminum handle; easy to read scale; measures foot-pounds in either direction; 200 ft.-lbs. range in 10 ft.-lbs. divisions.
- Wrench, Vise-grip (see: Pliers, Vise-grip #3170)**

AMERICAN STANDARDS FOR SAFETY

(These standards are also included in the preceding general list)

(Special price of complete set, \$190.00)

A2.1-1956 Fire Tests of Building Construction and Materials, Methods of (ASTM E119-55; NFPA 251-1955)	1.00
A2.2-1960 Fire Tests of Door Assemblies, Methods of (ASTM E152-58; NFPA 252-1958)	1.00
A2.5-1963 Surface Burning Characteristics of Building Materials, Method of Test for (ASTM E84-61; UL 723-1960; NFPA 255-61)	1.00
A2.6-1963 Fire Tests of Window Assemblies, Methods of (ASTM E163-60T; UL 9-62)	1.00
A10.1-1951 Manual of Accident Prevention in Construction	Out of Print
A10.2-1944 †Building Construction, Safety Code for (Partially revised by A10.4-1963)	3.50
A10.4-1963 †Workmen's Hoists, Safety Requirements for (Revision of Section 10, Part XI of A10.2-1944)	2.00
★A11.1-1965 Industrial Lighting, Practice for (IES RP 7-1965) .....	.80
A12-1932 †Floor and Wall Openings, Railings, and Toe Boards, Safety Code for	2.00
A13.1-1956 Identification of Piping Systems, Scheme for the	1.50
A14.1-1959 †Portable Wood Ladders, Safety Code for	2.50
A14.2-1956 †Portable Metal Ladders, Safety Code for	2.00
A14.3-1956 †Fixed Ladders, Safety Code for	2.00
★A17.1-1965 Elevators, Dumbwaiters, and Moving Walks, Safety Code for (Revision and Consolidation of A17.1-1960, A17.1a-1963, and A17.1.13-1962)	6.50
A17.2-1960 Elevators, Practice for the inspection of (Inspectors' Manual)	4.00
★A17.2a-1965 Addenda to A17.2-1960, sold separately .....	.50
A23.1-1962 School Lighting, Guide for (IES RP3-1962) .....	.50
A39.1-1959 †Window Cleaning, Safety Code for	2.00
A85.1-1956 Protective Lighting, Practice for (IES RP10-1956) .....	.50
A90.1-1949 (R1956) Manlifts, Safety Code for	1.50
★A113.1-1964 Mechanized Parking Garage Equipment, Safety Code for	3.75
A117.1-1961 †Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped, Specifications for	2.00
A119.1-1963 Plumbing, Heating, and Electrical Systems in Mobile Homes, Installation of	1.00
A119.2-1963, Plumbing, Heating, and Electrical Systems in Travel Trailers, Installation of	1.00
•	
B7.1-1964 Use, Care, and Protection of Abrasive Wheels, Safety Code for the	1.00
B9.1-1964 Mechanical Refrigeration, Safety Code for (ASRE 15-63)	3.50
B11.1-1960 †Power Presses, Safety Code for	4.00
B15.1-1953 (R1958) Mechanical Power-Transmission Apparatus, Safety Code for	3.00
B19-1938 Compressed Air Machinery and Equipment, Safety Code for	Out of Print
B20.1-1957 Conveyors, Cableways, and Related Equipment, Safety Code for	2.50
B24.1-1963 †Forging and Hot Metal Stamping, Safety Code for	2.50
B28.1-1949 (R1959) †Mills and Calenders in the Rubber Industry, Safety Code for	3.00
B30.1-1943 (R1952) Jacks, Safety Code for	1.50
B30.2-1943 (R1952) Cranes, Derricks, and Hoists, Safety Code for	4.00
B31.1-1955 Pressure Piping, Code for, with addenda B31.1a-1965 (Current except for Sections on Refinery, Oil Transportation, and Refrigeration Piping which are listed below)	4.00
★B31.1a-1965 Addenda to B31.1-1955, sold separately .....	.50
B31.3-1962 Petroleum Refinery Piping, with addenda B31.3a-1964	4.00
★B31.3a-1964 Addenda to B31.3-1962, sold separately .....	.50
B31.4-1959 Oil Transportation Piping, with addenda B31.4a-1965	4.00

▲, not yet available; †, quantity prices apply; ★, approved since last price list; R, reaffirmed

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

★B31.4a-1965 Addenda to B31.4-1959, sold separately .....	.50	
B31.5-1962 Refrigeration Piping, with addenda B31.5a-1965		4.00
★B31.5a-1965 Addenda to B31.5-1962, sold separately .....	.50	
B31.8-1963 Gas Transmission and Distribution Piping Systems, with addenda B31.8a-1965		4.00
★B31.8a-1965 Addenda to B31.8-1963, sold separately .....	.50	
B56.1-1959 Powered Industrial Trucks, Safety Code for		2.00
★B57.1-1965 Compressed Gas Cylinder Valve Outlet and Inlet Connections (CGA V-1-1965) [Agrees with ISO R407]		3.00
B65.1-1954 †Controls and Signaling Devices for Graphic Arts Presses, Safety Code for		2.00
B71.1-1964 †Power Lawn Mowers, Safety Specifications for		2.00
B77.1-1960 †Aerial Passenger Trainways, Safety Code for, with addenda B77.1a- 1963 and B77.1b-1965		4.50
B77.1a-1963 †Addenda to B77.1-1960, sold separately	1.00	
★B77.1b-1965 †Addenda to B77.1-1960, sold separately	1.00	
B97.1-1963 Household Refrigerators and Freezers, Safety for (UL 250-April, 1963) .....		.60
●		
★C1-1965 National Electrical Code (NFPA 70-1965)		1.00
● C2 — National Electrical Safety Code (NBS Handbook H30):		
C2.1-1941 (R1947) Installation and Maintenance of Electrical Supply Stations, Safety Rules for the (NBS Handbook H31-1940)		2.25
C2.2-1941 (R1947)—Revised and replaced by C2.2-1960		
C2.3-1941 (R1947) Installation and Maintenance of Electric Utilization Equipment, Safety Rules for the (NBS Handbook H33-1940)		
C2.4-1939 (R1947) Operation of Electric Equipment and Lines, Safety Rules for the (NBS Handbook H34-1938)		
C2.5-1940 (R1947) Radio Installations, Safety Rules for (NBS Handbook H35-1939) C2.2-1960 Installation and Maintenance of Electric Supply and Communication Lines, Safety Rules for the (NBS H81-1961), including C2.2a-1965, sold separately		
★C2.2a-1965 Supplement No. 1 to C2.2-1960, sold separately .....	.15	1.90
★C5.1-1965 Lightning Protection Code (NFPA No. 78-1965) .....		.75
●		
C33.1-1957 Flexible Cord and Fixture Wire, Safety Standard for (UL 62-March- 1957)		Out of Print
C33.2-1956 Transformer-Type Arc-Welding Machines, Safety Standard for (UL 551- October-1952) .....		.75
C33.3-1957 Cord Sets and Power-Supply Cords, Safety Standard for (UL 817- December-1955)		Out of Print
C33.4-1958 Specialty Transformers, Safety Standard for (UL 506-October-1952) .....		.75
C33.5-1956 Wire Connectors and Soldering Lugs, Safety Standard for (UL 486- February-1953) .....		.75
C33.6-1957 Rubber-Covered Wires and Cables, Safety Standard for (UL 44-April- 1956)		Out of Print
C33.7-1957 Electrically Heated Pads and Bedding, Safety Standard for (UL 130- December-1954) .....		.75
C33.8-1957 Grounding and Bonding Equipment, Safety Standard for (UL 467-April- 1957) .....		.50
C33.9-1959 Armored Cable, Safety Standards for (UL 4-March-1959)		Out of Print
C33.10-1961 Fuseholders, Safety Standards for (UL 512-May-1961) .....		.75
C33.11-1964 Electric Heating Appliances, Safety Standard for (UL 499-June-1962) .....		.75
C33.12-1964 Electric Space-Heating Equipment, Safety Requirements for (UL 573- December-1962)		1.00
★C33.13-1965 Home-Laundry Equipment, Safety Requirements for (UL 560-May- 1963) .....		.80
★C33.14-1965 Room Air Conditioners, Safety Requirements for (UL 484-December- 1961) .....		.60
★C33.15-1965 Flexible Nonmetallic Tubing, Requirements for (UL 3 April-1964)		▲
★C33.17-1965 Edison-Base Lampholders, Requirements for (UL 496 May 1964)		▲
★C33.18-1965 Cord Reels, Requirements for (UL 355 April-1964)		▲
★C33.19-1965 Electrically Illuminated Frames (UL 368 February-1957)		▲

★C33.20-1965 Rosettes, Requirements for (UL 351 October-1952)	▲
★C33.21-1965 Porcelain Cleats, Knobs, and Tubes, Requirements for (UL 511 October-1946)	▲
★C33.22-1965 Protectors for Communication Circuits, Requirements for (UL 491 November-1961)	▲
C37.19-1963 †Low-Voltage AC Power Circuit Breakers and Switchgear Assemblies, Safety Requirements for	2.00
★C39.5-1964 †Electrical Measuring and Controlling Instrumentation, Electrical Safety Requirements for	2.00
●	
D6.1-1961 Manual on Uniform Traffic Control Devices for Streets and Highways	2.00
D7.1-1963 †Inspection Requirements for Motor Vehicles, Trailers and Semi-Trailers Operated on Public Highways (Partial revision of D7.1-1956)	2.50
D7.2-1963 †Station Requirements for Inspection of Motor Vehicles, Trailers, and Semi-Trailers in Stations Owned and Operated by Regulatory Authority (Partial revision of D7.1-1956)	1.50
D7.3-1963 †Station Requirements for Inspection of Motor Vehicles, Trailers, and Semi-Trailers in Stations Appointed and Licensed by Regulatory Authority (Partial Revision of D7.1-1956)	1.50
D8.1-1956 Railroad Highway Grade Crossing Protection (AAR Bulletin 5)	Out of Print
D10.1-1958 Adjustable Face Traffic Control Signal Head Standards (ITE Technical Report 1-1958)	Out of Print
D11.1-1958 Pre-Timed, Fixed Cycle, Traffic Signal Controllers (ITE Technical Report 2-1958) .....	.50
D12.1-1963 Roadway Lighting, Practice for (IES RP 8-1963)	1.00
D13.1-1958 Traffic-Actuated Traffic Signal Controllers and Detectors, Specifications for (ITE Technical Report 3-1958) .....	.50
D15.1-1960 †Recording and Measuring Motor Vehicle Fleet Accident Experience, Method of	2.00
D15.2-1960 †Recording and Measuring Motor Vehicle Fleet and Passenger Accident Experience, Method of	2.00
D16.1-1962 Classification of Motor-Vehicle Traffic Accidents, Manual on	1.00
● J6 — Specifications for Rubber Protective Equipment for Electrical Workers:	
J6.1-1950 (R1962) Rubber Insulating Line Hose (ASTM D1050-59)	1.00
J6.2-1950 (R1952) Rubber Insulator Hoods (ASTM D1049-59)	
J6.4-1950 (R1962) Rubber Insulating Blankets (ASTM D1048-59)	
J6.5-1962 Rubber Insulating Sleeves (ASTM D1051-59)	
J6.6-1964 Rubber Insulating Gloves, Specifications for (ASTM D120-63) (Revision and Consolidation of J6.6-1962 (ASTM D120-59T) and J6.8-1962 (ASTM D1700-59))	
J6.7-1935 (R1962) Rubber Matting (reaffirmation and redesignation of C59.4-1935) (ASTM D178-24)	
J6.8-1962 Revised and Consolidated with J6.6-1964 (ASTM D120-63)	
●	
K13.1-1961 †Identification of Gas-Mask Canisters, Safety Code for the	1.50
K61.1-1960 Storage and Handling of Anhydrous Ammonia, Safety Requirements for the (CGA G-2.1-1960)	1.00
●	
L1.1-1956 (R1964) †Textile Safety Code	2.00
L14.69-1963 Flammability of Clothing Textiles, Test Method for (AATCC 33-1957; ASTM D1230-61)	1.00
● L18 — Specifications for Protective Occupational (Safety) Clothing (American War Standards):	
L18.1-1944 †Leather Aprons	Out of Print
L18.2-1944 †Cape Sleeves and Bibs	Out of Print
L18.3-1944 †Knee-Length Leggings	Out of Print
L18.4-1944 †Leather Coats	Out of Print
L18.5-1944 †Leather Overalls	Out of Print
L18.6-1944 †Leather Sleeves	Out of Print
L18.7-1944 †Welders' Leather Gauntlet Gloves	Out of Print
L18.8-1944 †Protective Leather Gloves, Steel-Stapled	Out of Print
L18.9-1944 †Asbestos Gloves	Out of Print

L18.10-1944 †Asbestos Gloves, Leather Reinforced	Out of Print
L18.11-1944 †Asbestos Mittens	Out of Print
L18.12-1944 †Asbestos Mittens, Leather Reinforced	Out of Print
L18.14-1944 †Asbestos Aprons (Bib Type)	Out of Print
L18.15-1944 †Asbestos Cape Sleeves and Bibs	Out of Print
L18.16-1944 †Asbestos Leggings (Knee and Hip Length)	Out of Print
L18.17-1944 †Asbestos Coats	Out of Print
L18.18-1945 †Leather One-Finger Mittens	Out of Print
L18.19-1945 †Leather Mittens	Out of Print
L18.20-1945 †Asbestos One-Finger Mittens	Out of Print
L18.21-1945 †Flame-Resistant Fabric Aprons (Bib Type)	Out of Print
L18.22-1945 †Flame-Resistant Fabric Leggings (Knee and Hip Length)	Out of Print
L18.23-1945 †Flame-Resistant Fabric Coats	Out of Print
L18.24-1945 †Flame-Resistant Fabric Pants	Out of Print
L18.25-1945 †Flame-Resistant Fabric Coveralls	Out of Print
L18.26-1945 †Flame-Resistant Fabric Spats	Out of Print
L18.27-1945 †Leather Spats	Out of Print
L18.28-1945 †Asbestos Spats	Out of Print
L18.29-1945 †Chemical-Resistant Gloves	Out of Print

M2.1-1963 Installing and Using Electrical Equipment in and about Coal Mines, Safety Rules for (BMIC 8227) .....	.25
M11.1-1960 †Wire Ropes for Mines, Specifications for and Use of	3.50
M12.1-1946 (R1958) †Construction and Maintenance of Ladders and Stairs for Mines	1.50
M13.1-1960 Rock-Dusting Underground Bituminous-Coal and Lignite Mines to Prevent Coal-Dust Explosions, Practice for (BMIC 8001) .....	.50
M24-1932 †Installing and Using Electrical Equipment in Metal Mines, Safety Rules for	Out of Print
M28.1-1955 †Safety Procedures for Quarries	3.50

N2.1-1960 Radiation Symbol .....	.60
N7.1-1960 †Radiation Protection in Uranium Mines and Mills (Concentrators)	3.00
N7.2-1963 †Radiation Protection in Nuclear Fuel Fabrication Plants	3.00

O1.1-1954 (R1961) †Woodworking Machinery, Safety Code for	2.50
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P1.1-1963 †Pulp and Paper Mills, for Safety in	2.00
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S3-W-39 †The Effects of Shock and Vibration on Man \$3.50

This report, a review of the effects of shock and vibration on man, covers a very broad scope. It deals with three problems: (1) the determination of the structure and properties of the human body considered as a mechanical as well as a biological system; (2) the effects of shock and vibration forces on this system; and (3) the protection required by the system under various exposure conditions and the means by which this protection is to be achieved. ASA Sectional Committee on Bio-acoustics, S3, recommends dissemination of the report as pertinent background and reference material on human vibration research, until such time as more definitive guidance on permissible vibration exposures can be provided through a standard. Fifty-six pages, 8½ x 11 in., 44 figures, 5 tables, paper cover.

X2.5.17-1954 †Maximum Electrical Leakage of Dictating Machines	1.00
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Z2.1-1959 †Head, Eye, and Respiratory Protection, Safety Code for	3.50
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Z2 Report—The Spectral-Transmissive Properties of Plastics for Use in Eye Protection \$3.50

48-page, 8½ x 11 inch, 106 charts, 4 tables, heavy paper cover. This report was prepared by a subcommittee on Transmissive Properties of Plastics, and contains ultraviolet, luminous and infrared spectral-transmissive properties and other characteristic data on many of the presently available types of plastics suitable for use in protecting the eyes in industrial and certain other operations.

Z4.1-1955 †Sanitation in Places of Employment, Minimum Requirements for	2.00
Z4.2-1942 †Drinking Fountains, Specifications for	1.00
Z4.3-1935 Sanitary Privy (Supplement 108 to the Public Health Reports)	Out of Print
Z8.1-1961 †Laundry Machinery and Operations, Safety Code for	2.00
Z9.1-1951 †Ventilation and Operation of Open-Surface Tanks, Safety Code for	2.50
Z9.2-1960 †Design and Operation of Local Exhaust Systems, Fundamentals Governing the	5.00
Z9.3-1964 †Design, Construction, and Ventilation of Spray Finishing Operations, Safety Code for the	3.00
• Z12 — Dust Explosions:	
Z12.1-1961 Installation and Operation of Pulverized-Fuel Systems, Standard for the (NFPA No. 60-May-1961) .....	.60
Z12.2-1962 Starch Factories, Code for the Prevention of Dust Explosions in (NFPA No. 61A-May-1962) .....	.50
Z12.3-1962 Flour and Feed Mills, Code for the Prevention of Dust Explosions in (NFPA No. 61C-May-1962) .....	.60
Z12.4-1959 Terminal Grain Elevators, Code for the Prevention of Dust Explosions in (NFPA No. 61B-June-1959) .....	.50
Z12.6-1959 (2nd ed) Pulverized Sugar and Cocoa, Standard for the Prevention of Dust Explosions in (NFPA No. 62-June-1959) .....	.40
Z12.7-1959 (2nd ed) Coal Preparation Plants, Standard for the Prevention of Dust Explosions in (NFPA No. 653-June-1959) .....	.50
Z12.9-1959 Spice Grinding Plants, Code for the Prevention of Dust Ignitions in (NFPA No. 656-June-1959) .....	.40
Z12.11-1963 Manufacture of Aluminum Powder, Code for the Prevention of Dust Explosions in the (NFPA No. 651-June-1963) .....	.50
Z12.12-1959 Sulfur Fires and Explosions, Standard for Prevention of (NFPA No. 655-June-1959) .....	.50
Z12.13-1959 Country Grain Elevators, Code for the Prevention of Dust Ignitions in (NFPA No. 64-June-1959) .....	.40
Z12.14-1943 Grain Elevators and Storage Units, Suggested Good Practices for the Application of Suction and Venting for the Control of Dust in (NFPA No. 661-1942) .....	.25
Z12.15-1959 Magnesium Powder or Dust, Code for Explosion and Fire Protection in Plants Producing or Handling (NFPA No. 652-June-1959) .....	.40
Z12.16-1963 Plastic Industry, Code for the Prevention of Dust Explosions in the (NFPA No. 654-June-1963) .....	.75
Z12.18-1959 Confectionery Manufacturing Plants, Code for the Prevention of Dust Explosions in (NFPA No. 657-June-1959) .....	.40
Z12.19-1963 Aluminum, Code for the Processing and Finishing of (NFPA No. 65-June-1963) .....	.50
Z12.20-1962 Woodworking and Wood Flour Manufacturing Plants, Code for the Prevention of (NFPA No. 664-May-1962) .....	.60
★Z12.21-1964 Prevention of Dust Explosions in industrial Plants, Fundamental Principles for the (NFPA No. 63-1964) .....	.50
★Z12.22-1964 Pneumatic Conveying Systems for Handling Feed, Flour, Grain and Other Agricultural Products (NFPA No. 66-1964) .....	.60

Z16.1-1954 (R1959) †Recording and Measuring Work Injury Experience, Method of	2.00
Z16.2-1962 †Method of Recording Basic Facts Relating to Nature and Occurrence of Work Injuries	4.00
Z20.3-1957 Places of Outdoor Assembly, Grandstands and Tents (NFPA No. 102-May-1957)	.50
Z21.30-1964 Gas Appliances and Gas Piping, Installation Requirements for (NFPA 54-1964)	.75
Z24.22-1957 †Measurement of Real-Ear Attenuation of Ear Protectors at Threshold, Method for	2.00

Z24-X2 †The Relations of Hearing Loss to Noise Exposure \$3.50

64 pp. 8½ x 11 in., 18 figures, 8 tables, paper cover. This report by Exploratory Subcommittee Z24-X-2 of Sectional Committee Z24 on Acoustics, Vibration, and Mechanical Shock analyzes the noise problem. Representing one of the most comprehensive surveys ever made, it tells what factors enter into the industrial loss of hearing; how much certain types of noise affect hearing; what allowance to make for recovery of hearing after noise exposure; what loss of hearing to expect of different age groups.

Z26.1-1950 †Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways, Safety Code for, with Addenda Z26.1a-1964	3.00
★Z26.1a-1964 †Addenda to Z26.1-1950, sold separately	1.00
Z33.1-1961 Installation of Blower and Exhaust Systems for Dust, Stock, and Vapor Removal or Conveying (NFPA 91-1961; NBFU 91-1961)	.50
Z35.1-1959 †Industrial Accident Prevention Signs, Specifications for	2.00
• Z37 — Allowable Concentration of Toxic Dusts and Gases:	
Z37.1-1941 †Carbon Monoxide, Allowable Concentration of	1.50
Z37.2-1941 †Hydrogen Sulfide, Allowable Concentration of	1.50
Z37.3-1941 †Carbon Disulfide, Allowable Concentration of	1.50
Z37.4-1960 †Benzene, Maximal Acceptable Concentration of	2.00
Z37.6-1948 †Manganese, Allowable Concentration of	1.50
Z37.7-1943 †Chromic Acid and Chromates, Allowable Concentration of	1.50
Z37.8-1943 †Mercury, Allowable Concentration of	1.50
Z37.10-1960 †Xylene, Maximal Acceptable Concentration of	2.00
Z37.11-1943 †Lead and Certain of Its Inorganic Compounds, Allowable Concentration of	1.50
Z37.12-1960 †Toluene, Maximal Acceptable Concentration of	2.00
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● L24 — Institutional Textiles, Performance Requirements for:	
(Part VIII, Test Methods, is a necessary companion volume to any or all of the fol- lowing L24 Parts, except Part V and Part VI. Part VIII therefore must be purchased with any or all of the following L24 Parts, except Part V and Part VI.) (Special price of complete L24-1963 series, \$10.00)	
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